Study plan

Name of study plan: Bachelor Specialization Artificial Intelligence, in Czech, 2024

Garantor of the st Program of study Type of study: Ba Required credits: Elective courses of Sum of credits in Note on the plan: 2024/2025 do pres	juaranteed by the department: Welcome page tudy branch: : Informatika chelor full-time 153 credits: 27		-			
	k: Compulsory courses in the program of credits of the block: 106 ock: PP					
Code of the group Name of the group 2021	b: BI-PP.21 b: Compulsory Courses of Bachelor Study Program	Informatic	s, pres	ented i	n Czech,	version
-	dits in the group: In this group you have to gain 10					
•	rses in the group: In this group you have to comple	ete 20 cou	rses			
Credits in the gro	•		nformati	aa Cam	nutor Notu	iorko ond
	you plan to profile the specialization Information Security, Maternet, Computer Systems and Virtualization, Software Engineering					
	I-PSI.21 in your 2nd semester of study. If you plan to profile t					
E	ngineering, Computer Science, or Artificial Intelligence, enro	oll in the cour	rse BI-P	SI.21 in <u>s</u>	your 4th se	emester
	f study. If you plan to profile yourself in the Artificial Intelliger					
	your 3rd semester of study. Otherwise, enroll in the course an to profile the specialization Artificial Intelligence or Web					
•	our 5th semester of study. Otherwise, enroll in the course BI					0.21
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-AG1.21	Algorithms and Graphs 1 Dušan Knop, Michal Opler, Ond ej Suchý, Tomáš Valla, Radek Hušek Dušan	Z,ZK	5	2P+2C	Z	PP
BI-AAG.21	Knop Dušan Knop (Gar.) Automata and Grammars	Z,ZK	5	2P+2C	Z	PP
BI-BAP.21	Jan Holub, Jan Janoušek Jan Holub Jan Holub (Gar.) Bachelor Thesis Zden k Muziká Zden k Muziká Zden k Muziká (Gar.)	Z	14		L,Z	PP
BI-BPR.21	Bachelor project Zden k Muziká Zden k Muziká (Gar.)	Z	1	0P+0C	Z,L	PP
BI-DBS.21	Database Systems Michal Valenta, Jan Blizni enko, Ji í Hunka, Monika Borkovcová, Jan Matoušek, Pavel K íž, Št pán Pechman, Dominik Roudný, Jan Bittner, Ji í Hunka Michal Valenta (Gar.)	Z,ZK	5	2P+2R+1L	L	PP
BI-DML.21	Discrete Mathematics and Logic Ji ina Scholtzová, Daniel Dombek, Jan Sp vák Daniel Dombek Jan Sp vák (Gar.)	Z,ZK	5	2P+1R+1C	Z	PP
BI-KAB.21	Cryptography and Security Ivana Trummová, Tomáš Rabas, Tomáš Zahradnický, Ji í Bu ek, Martin Jure ek, Josef Kokeš, Róbert Lórencz, Julia Plotnikova, David Pokorný, Róbert Lórencz Róbert Lórencz (Gar.)	Z,ZK	5	2P+2C	L	PP
BI-LA1.21	Linear Algebra 1 Lud k Kleprlík, Jakub Krásenský, Karel Klouda Lud k Kleprlík Karel Klouda (Gar.)	Z,ZK	5	2P+1R+1C	Z	PP

BI-MA1.21	Mathematical Analysis 1 Pavel Hrabák, Tomáš Kalvoda, Ivo Petr, Petr Olšák, Pavel Paták Tomáš Kalvoda Tomáš Kalvoda (Gar.)	Z,ZK	5	2P+1R+1C	L	PP
BI-MA2.21	Mathematical Analysis 2 Pavel Hrabák, Tomáš Kalvoda, Ivo Petr, Petr Olšák, Pavel Paták Tomáš Kalvoda Tomáš Kalvoda (Gar.)	Z,ZK	6	3P+2C	Z	PP
BI-OSY.21	Operating Systems Petr Zemánek, Ji í Kašpar, Michal Štepanovský, Jan Trdli ka, Pavel Tvrdík, Ladislav Vagner Pavel Tvrdík Michal Štepanovský (Gar.)	Z,ZK	5	2P+1R+1L	L	PP
BI-PSI.21	Computer Networks Viktor erný, Michal Hažlinský, Vladimír Smotlacha, Yelena Trofimova, Jan Fesl, Josef Koumar, Petr Hoda , Josef Zápotocký, Michal Polák, Jan Fesl Jan Fesl (Gar.)	Z,ZK	5	2P+1R+1C	L	PP
BI-PST.21	Probability and Statistics Kamil Dedecius, Pavel Hrabák, Jitka Hrabáková, Petr Novák, Jana Vacková Pavel Hrabák Pavel Hrabák (Gar.)	Z,ZK	5	2P+2C	Z	PP
BI-PA1.21	Programming and Algorithmics 1 Radek Hušek, Jan Trávní ek, Miroslav Balík, Josef Vogel, Ladislav Vagner Jan Trávní ek Jan Trávní ek (Gar.)	Z,ZK	7	2P+2R+2C	Z	PP
BI-PA2.21	Programming and Algorithmics 2 Radek Hušek, Jan Trávní ek, Josef Vogel, Ladislav Vagner Jan Trávní ek Jan Trávní ek (Gar.)	Z,ZK	7	2P+1R+2C	L	PP
BI-SAP.21	Computer Structure and Architecture Hana Kubátová, Jaroslav Borecký, Petr Fišer, Martin Kohlík Hana Kubátová Hana Kubátová (Gar.)	Z,ZK	5	2P+1R+2C	L	PP
BI-TZP.21	Technological Fundamentals of Computers Jan ezní ek, Jaroslav Borecký, Robert Hülle, Martin Kohlík, Vojt ch Miškovský, Martin Novotný, Matúš Olekšák Martin Novotný Martin Novotný (Gar.)	Z,ZK	5	2P+2C	Z	PP
BI-GIT.21	SW Development Technologies Petr Pulc, Robin Ob rka Robin Ob rka Petr Pulc (Gar.)	Z	3	2P	Z	PP
BI-TDP.21	Documentation and Presentation Ond ej Guth, Petra Pavlí ková, Dana Vynikarová, Alena Libánská, Tomáš Nová ek Dana Vynikarová Dana Vynikarová (Gar.)	KZ	3	2P+2C	Z,L	PP
BI-UOS.21	Unix-like Operating Systems Zden k Muziká, Petr Zemánek, Viktor erný, Michal Hažlinský, Jakub Jan i ka, Miroslav Prágl, Michal Šoch, Jan Trdli ka, Yelena Trofimova, Zden k Muziká Zden k Muziká (Gar.)	KZ	5	2P+2C	Z	PP

Characteristics of the courses of this group of Study Plan: Code=BI-PP.21 Name=Compulsory Courses of Bachelor Study Program Informatics, presented in Czech, version 2021

BI-AG1.21	Algorithms and Graphs 1	Z,ZK	5			
The course covers the b	asics of efficient algorithm design, data structures, and graph theory, belonging to the core knowledge of every computing o	urriculum. It links	and partially			
develops the knowledge	from the course BI-DML.21, in which students acquire the knowledge and skills in combinatorics necessary for evaluating the	ne time and space	e complexity of			
algorithms. The course	also follows up knowledge from BI-MA1.21, the practical usage of asymptotic mathematics, in particular, the asymptotic nota	tion.				
BI-AAG.21	Automata and Grammars	Z,ZK	5			
Students are introduced	to basic theoretical and implementation principles of the following topics: construction, use and mutual transformations of fini	ite automata, regu	Ilar expressions,			
and regular grammars,	context-free grammars, construction and use of pushdown automata, and translation grammars and transducers. They know	the hierarchy of fo	ormal languages			
and they understand the	relationships between formal languages and automata. They are introduced to the Turing machine and complexity classes I	^D and NP.				
BI-BAP.21	Bachelor Thesis	Z	14			
BI-BPR.21	Bachelor project	Z	1			
1. At the beginning of th	e semester, the student reserves the topic of the bachelor's thesis and connects with the supervisor. He / she will arrange the	e partial tasks tha	t he / she will			
perform during the sem	ester to process the assignment. If he completes these tasks, the supervisor will award him a credit from the subject BI-BPR	at the end of the	semester. 2. The			
external supervisor ente	rs the information on granting the credit using the form "Granting credit from the external supervisor of the final thesis" (http://fit.	cvut.cz/student/stu	udijni/formulare).			
The completed and sigr	ed form must be delivered in person or by email to the SZZ coordinator, who will arrange for the credit to be granted. 3. If the	topic of the work	that the student			
has reserved is formulat	ed more generally, the tasks assigned to him by the supervisor for the semester should be aimed primarily at fine-tuning the a	ssignment so that	t the assignment			
can be supplemented a	nd approved at the end of the semester.					
BI-DBS.21	Database Systems	Z,ZK	5			
Students are introduced	to the database engine architecture and typical user roles. They are briefly introduced to various database models. They lea	irn to design smal	l databases			
(including integrity cons	traints) using a conceptual model and implement them in a relational database engine. They get a hands-on experience with	the SQL language	e, as well as with			
its theoretical foundation	- the relational database model. They learn the principles of normalizing a relational database schema. They understand the fu	ndamental concep	ots of transaction			
processing, controlling	parallel user access to a single data source, as well as recovering a database engine from a failure. They are briefly introduce	ed to special ways	s of storing data			
in relational databases	with respect to speed of access to large quantities of data. This introductory-level course does not cover: Administration of da	atabase systems,	debugging and			
optimizing database ap	plications, distributed database systems, data stores.					
BI-DML.21	Discrete Mathematics and Logic	Z,ZK	5			
Students will get acquai	nted with the basic concepts of propositional logic and predicate logic and learn to work with their laws. Necessary concepts	from set theory w	/ill be explained.			
Special attention is paid	to relations, their general properties, and their types, especially functional relations, equivalences, and partial orders. The co	ourse also lays do	wn the basics of			
combinatorics and num	per theory, with emphasis on modular arithmetics.					
BI-KAB.21	Cryptography and Security	Z,ZK	5			
Students will understand	d the mathematical foundations of cryptography and gain an overview of current cryptographic algorithms. They will be able t	o use cryptograph	nic keys and			
certificates in systems b	ased on them and learn the basics of safe use of symmetric and asymmetric cryptographic systems and hash functions in a	pplications. Withir	n labs, students			
will gain practical skills in using standard cryptographic methods with an emphasis on security and will also get acquainted with the basic procedures of cryptanalysis.						
BI-LA1.21	Linear Algebra 1	Z,ZK	5			
We will introduce studer	nts to the basic concepts of linear algebra, such as vectors, matrices, vector spaces. We will define vector spaces over the field	ld of real and con	nplex numbers			
and also over finite fields. We will present the concepts of basis and dimension and learn to solve systems of linear equations using the Gaussian elimination method (GEM) and show						
the connection with line	ar manifolds. We define the regularity of matrices and learn to find their inversions using GEM. We will also learn to find eiger	nvalues and eiger	vectors of a			
matrix. We will also dem	ionstrate some applications of these concepts in computer science.					

BI-MA1.21 Mathematical Analysis 1	Z,ZK	5
We begin the course by introducing students to the set of real numbers and its properties, and we note its differences with the set of machine number	ers. Then we study	real sequences
and real functions of a real variable. We gradually introduce the notions of limits of sequences and functions, continuous functions, and derivatives of fu	nctions. This theor	etical foundation
is then applied to root-finding problems (iterative method of bisection and Newtons method), construction of cubic interpolation (spline), and formulation	and solution of sin	nple optimization
problems (i.e., the issue of finding extrema of functions). The course is closed with the Landaus asymptotic notation and methods of mathematical desc	cription of complex	ity of algorithms.
BI-MA2.21 Mathematical Analysis 2	Z,ZK	6
The course completes the theme of analysis of real functions of a real variable initiated in BI-MA1 by introducing the Riemann integral. Students will	1 ' 1	ate by parts and
use the substitution method. The next part of the course is devoted to number series, and Taylor polynomials and series. We apply Taylors theorem to	o the computation	of elementary
functions with a prescribed accuracy. Then we study the linear recurrence equations with constant coefficients, the complexity of recursive algorithms	s, and its analysis u	using the Master
theorem. Finally, we introduce the student to the theory of multivariate functions. After establishing basic concepts of partial derivative, gradient, and	Hessian matrix, v	ve study the
analytical method of localization of local extrema of multivariate functions as well as the numerical descent method. We conclude the course with the i	ntegration of multiv	ariate functions.
BI-OSY.21 Operating Systems	Z,ZK	5
In this course that is a follow-up of the Unix-like operating systems course students deepen their knowledge in areas of OS kernels, process and thread	I ' I	
critical regions, thread scheduling, shared resource allocation and deadlocks, management of virtual memory and data storages, file systems, OS r	-	
and implement simple multithreaded applications. General principles are illustrated on operating systems Solaris, Linux, or MS Windows.		Ū
BI-PSI.21 Computer Networks	Z,ZK	5
The course introduces students to the principles of computer networking. It covers basic technologies, protocols, and services commonly used in lo	I ' I	-
well. The lectures will be amended by proseminars that introduce students into network programming and demonstrate the abilities of advanced net		
practically verify configurations and management of network devices in the lab within the environment of the operating systems Linux and Cisco IO	-	
BI-PST.21 Probability and Statistics	Z,ZK	5
Students will learn the basics of probabilistic thinking, the ability to synthesize prior and posterior information and learn to work with random variable		-
models of random variable distributions and solve applied probabilistic problems in informatics and computer science. Using the statistical induction	-	
estimations of unknown distributional parameters from random sample characteristics. They will also be introduced to the methods for testing statist	-	-
the statistical dependence of two or more random variables.		la actermining
	Z.ZK	7
	I ' I	-
Students gain the ability to formulate algorithms for solving basic problems and write them in the C language. They understand data types (simple, statements, functions, concept of recursion. They learn to analyse simple cases of algorithm complexity. They know fundamental algorithms for sear		
with linked lists and trees.	crinity, sorting, and	manipulating
	774	7
BI-PA2.21 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,		-
table). They learn these skills using the C++ programming language and are introduced to all C++ features needed in object-oriented programming	(e.g., template pro	gramming,
copying/moving of objects, operator overloading, inheritance, polymorphism).		
BI-SAP.21 Computer Structure and Architecture	Z,ZK	5
Students will get acquainted with the basic architecture and units of a digital computer, understand the structure, function, and implementation of ar	-	
memory, I/O communication, methods of data transfers between the units. The logic design and the implementation of a program-controlled simple program.	ocessor is practica	ally implemented
in the labs using programmable circuits (FPGA), a single-chip microcomputer, and modern design (EDA) tools.		
BI-TZP.21 Technological Fundamentals of Computers	Z,ZK	5
Students get acquainted with the fundamentals of digital and analog circuits, as well as basic methods of analyzing them. Students learn how comput	er structures look	ike at the lowest
level. They are introduced to the function of a transistor. They will understand why processors generate heat, why cooling is necessary, and how to n		
limits to the maximum operating frequency are and how to raise them; why a computer bus needs to be terminated, what happens if it is not; how a		سماير اممارم الارم
(in principle). In the labs, students model the behavior of basic electrical circuits in SW Mathematica.	computer power s	upply looks like
	computer power s	upply looks like
BI-GIT.21 SW Development Technologies	computer power s	3
BI-GIT.21 SW Development Technologies This course is aimed at one of the rudimental team software development technology - version control. To be more specific, we will introduce studer	Z	3
	Z	3
This course is aimed at one of the rudimental team software development technology - version control. To be more specific, we will introduce studer	Z	3
This course is aimed at one of the rudimental team software development technology - version control. To be more specific, we will introduce studer from hell, as Linus Torvalds nicknamed it, and provide a comprehensive guide into its depths, as well as for day-to-day use.	Z ts to Git, the infor	3 nation manager 3
This course is aimed at one of the rudimental team software development technology - version control. To be more specific, we will introduce studer from hell, as Linus Torvalds nicknamed it, and provide a comprehensive guide into its depths, as well as for day-to-day use. BI-TDP.21 Documentation and Presentation	Z Its to Git, the inform KZ	3 mation manager 3 heses. Students
This course is aimed at one of the rudimental team software development technology - version control. To be more specific, we will introduce studer from hell, as Linus Torvalds nicknamed it, and provide a comprehensive guide into its depths, as well as for day-to-day use. BI-TDP.21 Documentation and Presentation The course is focused on the basics of creating electronic documentation with emphasis on the creation of technical reports of a larger scope, typical	Z Its to Git, the inform KZ Ily final university tresent it in front of	3 mation manager 3 heses. Students classmates and
This course is aimed at one of the rudimental team software development technology - version control. To be more specific, we will introduce studer from hell, as Linus Torvalds nicknamed it, and provide a comprehensive guide into its depths, as well as for day-to-day use. BI-TDP.21 Documentation and Presentation The course is focused on the basics of creating electronic documentation with emphasis on the creation of technical reports of a larger scope, typical learn to create text of a technical report in the LaTeX system, process an electronic presentation using the LaTeX Beamer system, and practically process an electronic documentation using the LaTeX Beamer system.	Z Its to Git, the inform KZ Ily final university tresent it in front of	3 mation manager 3 heses. Students classmates and
This course is aimed at one of the rudimental team software development technology - version control. To be more specific, we will introduce student from hell, as Linus Torvalds nicknamed it, and provide a comprehensive guide into its depths, as well as for day-to-day use. BI-TDP.21 Documentation and Presentation The course is focused on the basics of creating electronic documentation with emphasis on the creation of technical reports of a larger scope, typical learn to create text of a technical report in the LaTeX system, process an electronic presentation using the LaTeX Beamer system, and practically p the teacher. The course is intended primarily for those students who have chosen the topic of their bachelor's thesis or will choose it within the first exercises of the course, an active approach to the creation of individual parts of the bachelor's thesis is assumed.	Z Its to Git, the inform KZ Ily final university tresent it in front of	3 mation manager 3 heses. Students classmates and
This course is aimed at one of the rudimental team software development technology - version control. To be more specific, we will introduce studer from hell, as Linus Torvalds nicknamed it, and provide a comprehensive guide into its depths, as well as for day-to-day use. BI-TDP.21 Documentation and Presentation The course is focused on the basics of creating electronic documentation with emphasis on the creation of technical reports of a larger scope, typical learn to create text of a technical report in the LaTeX system, process an electronic presentation using the LaTeX Beamer system, and practically p the teacher. The course is intended primarily for those students who have chosen the topic of their bachelor's thesis or will choose it within the first of the teacher.	Z Its to Git, the inform KZ Ily final university t resent it in front of 4 days of teaching KZ	3 nation manager 3 heses. Students classmates and g. Within the 5
This course is aimed at one of the rudimental team software development technology - version control. To be more specific, we will introduce studer from hell, as Linus Torvalds nicknamed it, and provide a comprehensive guide into its depths, as well as for day-to-day use. BI-TDP.21 Documentation and Presentation The course is focused on the basics of creating electronic documentation with emphasis on the creation of technical reports of a larger scope, typical learn to create text of a technical report in the LaTeX system, process an electronic presentation using the LaTeX Beamer system, and practically p the teacher. The course is intended primarily for those students who have chosen the topic of their bachelor's thesis or will choose it within the first exercises of the course, an active approach to the creation of individual parts of the bachelor's thesis is assumed. BI-UOS.21 Unix-like Operating Systems	Z Its to Git, the inform KZ Ily final university t resent it in front of 4 days of teaching KZ a functions of mult	3 mation manager 3 heses. Students classmates and g. Within the 5 user operating
This course is aimed at one of the rudimental team software development technology - version control. To be more specific, we will introduce studer from hell, as Linus Torvalds nicknamed it, and provide a comprehensive guide into its depths, as well as for day-to-day use. BI-TDP.21 Documentation and Presentation The course is focused on the basics of creating electronic documentation with emphasis on the creation of technical reports of a larger scope, typical learn to create text of a technical report in the LaTeX system, process an electronic presentation using the LaTeX Beamer system, and practically p the teacher. The course is intended primarily for those students who have chosen the topic of their bachelor's thesis or will choose it within the first exercises of the course, an active approach to the creation of individual parts of the bachelor's thesis is assumed. BI-UOS.21 Unix-like Operating Systems Unix-like operating systems represent a large family mostly open-source codes that kept bringing during the history of computers efficient innovative.	Z Its to Git, the inform KZ Ily final university t resent it in front of 4 days of teaching KZ functions of multi verties of this OS fo	3 mation manager 3 heses. Students classmates and g. Within the 5 user operating amily, such as
This course is aimed at one of the rudimental team software development technology - version control. To be more specific, we will introduce studer from hell, as Linus Torvalds nicknamed it, and provide a comprehensive guide into its depths, as well as for day-to-day use. BI-TDP.21 Documentation and Presentation The course is focused on the basics of creating electronic documentation with emphasis on the creation of technical reports of a larger scope, typical learn to create text of a technical report in the LaTeX system, process an electronic presentation using the LaTeX Beamer system, and practically p the teacher. The course is intended primarily for those students who have chosen the topic of their bachelor's thesis or will choose it within the first exercises of the course, an active approach to the creation of individual parts of the bachelor's thesis is assumed. BI-UOS.21 Unix-like Operating Systems Unix-like operating systems represent a large family mostly open-source codes that kept bringing during the history of computers efficient innovative systems for computers and their networks and clusters. The most popular OS today, Android, has a unix kernel. Students get overview of basic propriate the set of	Z Its to Git, the inform KZ Ily final university to resent it in front of 4 days of teaching KZ a functions of multi verties of this OS for vel of advanced us	3 nation manager 3 heses. Students classmates and g. Within the 5 user operating amily, such as
This course is aimed at one of the rudimental team software development technology - version control. To be more specific, we will introduce studer from hell, as Linus Torvalds nicknamed it, and provide a comprehensive guide into its depths, as well as for day-to-day use. BI-TDP.21 Documentation and Presentation The course is focused on the basics of creating electronic documentation with emphasis on the creation of technical reports of a larger scope, typical learn to create text of a technical report in the LaTeX system, process an electronic presentation using the LaTeX Beamer system, and practically p the teacher. The course is intended primarily for those students who have chosen the topic of their bachelor's thesis or will choose it within the first exercises of the course, an active approach to the creation of individual parts of the bachelor's thesis is assumed. BI-UOS.21 Unix-like Operating Systems Unix-like operating systems represent a large family mostly open-source codes that kept bringing during the history of computers efficient innovative systems for computers and their networks and clusters. The most popular OS today, Android, has a unix kernel. Students get overview of basic prop processes and threads, access rights and user identity, filters, or handling files in a file system. They learn to use practically these systems at the learnee of the learnee of the systems at the learnee of the systems at the learnee of the system.	Z Its to Git, the inform KZ Ily final university to resent it in front of 4 days of teaching KZ a functions of multi verties of this OS for vel of advanced us	3 mation manager 3 heses. Students classmates and g. Within the 5 user operating amily, such as
This course is aimed at one of the rudimental team software development technology - version control. To be more specific, we will introduce studer from hell, as Linus Torvalds nicknamed it, and provide a comprehensive guide into its depths, as well as for day-to-day use. BI-TDP.21 Documentation and Presentation The course is focused on the basics of creating electronic documentation with emphasis on the creation of technical reports of a larger scope, typical learn to create text of a technical report in the LaTeX system, process an electronic presentation using the LaTeX Beamer system, and practically p the teacher. The course is intended primarily for those students who have chosen the topic of their bachelor's thesis or will choose it within the first exercises of the course, an active approach to the creation of individual parts of the bachelor's thesis is assumed. BI-UOS.21 Unix-like Operating Systems Unix-like operating systems represent a large family mostly open-source codes that kept bringing during the history of computers efficient innovative systems for computers and their networks and clusters. The most popular OS today, Android, has a unix kernel. Students get overview of basic prop processes and threads, access rights and user identity, filters, or handling files in a file system. They learn to use practically these systems at the le only able to utilize powerful system tools that are available to users, but are also able to automatize routine agenda using the unix scripting interface	Z Its to Git, the inform KZ Ily final university to resent it in front of 4 days of teaching KZ a functions of multi verties of this OS for vel of advanced us	3 mation manager 3 heses. Students classmates and g. Within the 5 user operating amily, such as
This course is aimed at one of the rudimental team software development technology - version control. To be more specific, we will introduce studer from hell, as Linus Torvalds nicknamed it, and provide a comprehensive guide into its depths, as well as for day-to-day use. BI-TDP.21 Documentation and Presentation The course is focused on the basics of creating electronic documentation with emphasis on the creation of technical reports of a larger scope, typical learn to create text of a technical report in the LaTeX system, process an electronic presentation using the LaTeX Beamer system, and practically p the teacher. The course is intended primarily for those students who have chosen the topic of their bachelor's thesis or will choose it within the first exercises of the course, an active approach to the creation of individual parts of the bachelor's thesis is assumed. BI-UOS.21 Unix-like Operating Systems Unix-like operating systems represent a large family mostly open-source codes that kept bringing during the history of computers efficient innovative systems for computers and their networks and clusters. The most popular OS today, Android, has a unix kernel. Students get overview of basic prop processes and threads, access rights and user identity, filters, or handling files in a file system. They learn to use practically these systems at the learnee of the learnee of the systems at the learnee of the systems at the learnee of the system.	Z Its to Git, the inform KZ Ily final university to resent it in front of 4 days of teaching KZ a functions of multi verties of this OS for vel of advanced us	3 nation manager 3 heses. Students classmates and g. Within the 5 user operating amily, such as

The role of the block: PS

Code of the group: BI-PS-UI.21

Name of the group: Compulsory courses of specialization Artificial Intelligence, version 2021 Requirement credits in the group: In this group you have to gain 30 credits Requirement courses in the group: In this group you have to complete 6 courses Credits in the group: 30 Note on the group:

Code	Name of the course / Name of the group of courses (in case of groups of courses the list of codes of their members) Tutors, authors and guarantors (gar.)	Completion	Credits	Scope	Semester	Role
BI-LA2.21	Linear Algebra 2 Daniel Dombek, Lud k Kleprlík, Karel Klouda, Marta Nollová, Jakub Šístek Lud k Kleprlík Karel Klouda (Gar.)	Z,ZK	5	2P+2C	L	PS
BI-PRS.21	Practical Statistics Kamil Dedecius, Petr Novák Petr Novák (Gar.)	КZ	5	1P+2C	L	PS
BI-ML1.21	Machine Learning 1 Karel Klouda, Daniel Vašata Daniel Vašata (Gar.)	Z,ZK	5	2P+2C	Z	PS
BI-ML2.21	Machine Learning 2 Daniel Vašata Daniel Vašata (Gar.)	Z,ZK	5	2P+2C	L	PS
BI-VIZ.21	Data Visualization Magda Friedjungová Magda Friedjungová Magda Friedjungová (Gar.)	KZ	5	3P	Z	PS
BI-ZUM.21	Artificial Intelligence Fundamentals Pavel Surynek Pavel Surynek (Gar.)	Z,ZK	5	2P+2C	L	PS

Characteristics of the courses of this group of Study Plan: Code=BI-PS-UI.21 Name=Compulsory courses of specialization Artificial Intelligence, version 2021

BI-LA2.21 Linear Algebra 2		
	Z,ZK	5
Studenti si v tomto p edm tu rozší í znalosti z p edm tu BI-LA1, kde se pracovalo pouze s vektory ve form n-tic ísel. Zde si zavedeme vektorový	prostor v abstraktn	í obecné form .
Seznámíme se také s pojmem skalární sou in a lineární zobrazení, což nám dovolí ukázat souvislost s lineární algebrou, geometrií a po íta ovou g	rafikou. Dalším ve	lkým tématem
bude numerická lineární algebra, kde si ukážeme potíže s ešením soustav lineárních rovnic na po íta i a možnosti, jak se s tímto problémem vypo	ádat s d razem na	rozklady matic.
Ukážeme si také aplikace lineární algebry v r zných oborech.		
BI-PRS.21 Practical Statistics	KZ	5
The students will be introduced to methods of applied statistics. They will learn how to work with various types of data, perform analyses, and choose	models fitting the o	data. The course
will encompass regression and correlation analysis, analysis of variance and non-parametric methods. Students will learn to use the statistical softw	are R and will app	ly the studied
methods on data from real problems.		
BI-ML1.21 Machine Learning 1	Z,ZK	5
The goal of this course is to introduce students to the basic methods of machine learning. They get theoretical understanding and practical working	knowledge of regr	ession and
classification models in the supervised learning scenario and clustering models in the unsupervised scenario. Students will be aware of the relations	ships between mo	del bias and
variance, and know the fundamentals of assessing model quality. Moreover, they learn the basic techniques of data preprocessing and multidimensi	onal data visualiza	tion. In practical
demonstrations, pandas and scikit libraries in Python will be used.		
BI-ML2.21 Machine Learning 2	Z,ZK	5
	· · · · · · · · · · · · · · · · · · ·	
The goal of this course is to introduce students to the selected advanced methods of machine learning. In the supervised learning scenario, they, in	particular, learn ke	ernel methods
The goal of this course is to introduce students to the selected advanced methods of machine learning. In the supervised learning scenario, they, in and neural networks. In the unsupervised learning scenario students learn the principal component analysis and other dimensionality reduction met	•	
	•	
and neural networks. In the unsupervised learning scenario students learn the principal component analysis and other dimensionality reduction met	•	
and neural networks. In the unsupervised learning scenario students learn the principal component analysis and other dimensionality reduction met basic principles of reinforcement learning and natural language processing.	hods. Moreover, st	tudents get the
and neural networks. In the unsupervised learning scenario students learn the principal component analysis and other dimensionality reduction met basic principles of reinforcement learning and natural language processing. BI-VIZ.21 Data Visualization	hods. Moreover, st	udents get the 5 content and their
and neural networks. In the unsupervised learning scenario students learn the principal component analysis and other dimensionality reduction met basic principles of reinforcement learning and natural language processing. BI-VIZ.21 Data Visualization The course offers an overview of the types and characteristics of data as well as suitable visualization methods. This will aid the students in understa	hods. Moreover, st KZ anding data, their c ssing, and ways o	udents get the 5 content and their f visualizing
and neural networks. In the unsupervised learning scenario students learn the principal component analysis and other dimensionality reduction met basic principles of reinforcement learning and natural language processing. BI-VIZ.21 Data Visualization The course offers an overview of the types and characteristics of data as well as suitable visualization methods. This will aid the students in understa application in areas such as data mining and machine learning. Within the course, students will be introduced to exploratory data analysis, preproce	hods. Moreover, st KZ anding data, their c ssing, and ways o	udents get the 5 content and their f visualizing
and neural networks. In the unsupervised learning scenario students learn the principal component analysis and other dimensionality reduction met basic principles of reinforcement learning and natural language processing. BI-VIZ.21 Data Visualization The course offers an overview of the types and characteristics of data as well as suitable visualization methods. This will aid the students in understa application in areas such as data mining and machine learning. Within the course, students will be introduced to exploratory data analysis, preproce different kinds of data such as text, social networks, time series or basic image data processing. Students will get hands-on experience in applications	hods. Moreover, st KZ anding data, their c ssing, and ways o	udents get the 5 content and their f visualizing
and neural networks. In the unsupervised learning scenario students learn the principal component analysis and other dimensionality reduction met basic principles of reinforcement learning and natural language processing. BI-VIZ.21 Data Visualization The course offers an overview of the types and characteristics of data as well as suitable visualization methods. This will aid the students in understa application in areas such as data mining and machine learning. Within the course, students will be introduced to exploratory data analysis, preproce different kinds of data such as text, social networks, time series or basic image data processing. Students will get hands-on experience in applications examples in the Python programming language.	hods. Moreover, st KZ anding data, their c essing, and ways o s of selected metho Z,ZK	5 content and their f visualizing ods to real-world 5
and neural networks. In the unsupervised learning scenario students learn the principal component analysis and other dimensionality reduction met basic principles of reinforcement learning and natural language processing. BI-VIZ.21 Data Visualization The course offers an overview of the types and characteristics of data as well as suitable visualization methods. This will aid the students in understa application in areas such as data mining and machine learning. Within the course, students will be introduced to exploratory data analysis, preproce different kinds of data such as text, social networks, time series or basic image data processing. Students will get hands-on experience in application examples in the Python programming language. BI-ZUM.21 Artificial Intelligence Fundamentals	hods. Moreover, st KZ anding data, their c essing, and ways o s of selected metho Z,ZK eded to create it w	5 content and their f visualizing ods to real-world 5 ill be discussed,
and neural networks. In the unsupervised learning scenario students learn the principal component analysis and other dimensionality reduction methods principles of reinforcement learning and natural language processing. BI-VIZ.21 Data Visualization The course offers an overview of the types and characteristics of data as well as suitable visualization methods. This will aid the students in understa application in areas such as data mining and machine learning. Within the course, students will be introduced to exploratory data analysis, preproce different kinds of data such as text, social networks, time series or basic image data processing. Students will get hands-on experience in applications examples in the Python programming language. BI-ZUM.21 Artificial Intelligence Fundamentals Basic course on introduction to artificial intelligence with emphasis on symbolic techniques. The design of an intelligent agent and the techniques networks.	KZ Anding data, their classing, and ways or assing, and ways or s of selected method Z,ZK eded to create it work or oby a non-physical	5 content and their f visualizing ods to real-world 5 ill be discussed,
and neural networks. In the unsupervised learning scenario students learn the principal component analysis and other dimensionality reduction methods basic principles of reinforcement learning and natural language processing. BI-VIZ.21 Data Visualization The course offers an overview of the types and characteristics of data as well as suitable visualization methods. This will aid the students in understa application in areas such as data mining and machine learning. Within the course, students will be introduced to exploratory data analysis, preproce different kinds of data such as text, social networks, time series or basic image data processing. Students will get hands-on experience in applications examples in the Python programming language. BI-ZUM.21 Artificial Intelligence Fundamentals Basic course on introduction to artificial intelligence with emphasis on symbolic techniques. The design of an intelligent agent and the techniques ne especially at the decision-making level. The intelligent agent in the context of the course can be represented for example by a physical robot, but also	KZ Anding data, their classing, and ways or assing, and ways or s of selected method Z,ZK eded to create it work or oby a non-physical	5 content and their f visualizing pds to real-world 5 ill be discussed,

Name of the block: Compulsory elective courses Minimal number of credits of the block: 15 The role of the block: PV

Code of the group: BI-PV-UI1.21

Name of the group: Compulsory elective courses for the specialization Artificial Intelligence - Group 1, version 2021

Requirement credits in the group: In this group you have to gain at least 5 credits (at most 10) Requirement courses in the group: In this group you have to complete at least 1 course (at most 2) Credits in the group: 5

Note on the group:

Code	Name of the course / Name of the group of courses (in case of groups of courses the list of codes of their members) Tutors, authors and guarantors (gar.)	Completion	Credits	Scope	Semester	Role
BI-JUL.21	Programming in Julia Tomáš Kalvoda Tomáš Kalvoda Tomáš Kalvoda (Gar.)	KZ	5	3C	Z	PV
BI-PYT.21	Python Programming Martin Šlapák, Ji í Hanuš, Ond ej Bouchala, Mohamed Bettaz, Jan Šafa ík Martin Šlapák Martin Šlapák (Gar.)	КZ	5	3C	Z,L	PV

Characteristics of the courses of this group of Study Plan: Code=BI-PV-UI1.21 Name=Compulsory elective courses for the specialization Artificial Intelligence - Group 1, version 2021

· · · · · · · · · · · · · · · · · · ·						
	ogramming in Julia introduce the students to Julia, a modern programming language and scientific program	mming environme	nt. In the fire	st part the c		5 arn the basi
•	lia. The second part is focused on thematically diverse applications of tools available in					
environment and get an over	erview of its capabilities for solving problems in various fields, which they can encounte					
	ython Programming get acquainted with basic efficient control and data structures of the Python programm	ing language for t	ovt and hir-		KZ	5 fforoncos
	get acquainted with basic efficient control and data structures of the Python programm ramming in Python and in other programming languages will be explained. Each topic				•	
	ndividual student work. Before each lab, students pass a short test on the last week top					
the semester.						
Code of the grou	•	A stificial	مالمعمال			versie
•	IP: Compulsory elective courses for the specialization	on Artificial	Intellig	ence -	Group 2,	versio
2021					0 0)	
•	dits in the group: In this group you have to gain at		•		,	
	urses in the group: In this group you have to comple	ete at leas	t 2 cou	rses (a	at most 4	4)
Credits in the gro	•					
Note on the grou	ip:					
	Name of the course / Name of the group of courses					
Code	(in case of groups of courses the list of codes of their members)	Completion	Credits	Scope	Semester	Role
	Tutors, authors and guarantors (gar.)					
BI-BIG.21	DB Technologies for Big Data Monika Borkovcová Monika Borkovcová Monika Borkovcová (Gar.)	KZ	5	2P+2C	Z,L	PV
BI-SVZ.21	Machine vision and image processing Marcel Ji ina, Jakub Novák, David Kramný, Justýna Frommová Jakub Novák Marcel Ji ina (Gar.)	Z,ZK	5	2P+2C	L,Z	PV
BI-VWM.21	Ji í Novák, Tomáš Skopal Ji í Novák Tomáš Skopal (Gar.)	Z,ZK	5	2P+1C	L	PV
BI-ZNS.21	Knowledge-based Systems Marcel Ji ina Marcel Ji ina Marcel Ji ina (Gar.)	Z,ZK	5	2P+2C	Z	PV
BI-BIG.21 DI Students will be introduced	e - Group 2, version 2021 B Technologies for Big Data into the field of Big Data processing where nonrelational (NoSQL) database engines and its were able to choose suitable tools (mostly open source) and techniques,design and		-			
-	ggregation, presentation). Students get acquainted with various architectures for process		-		-	
-	ill be supplemented with specific examples from practice.					
	achine vision and image processing ning a common part of life by being universally available. Related to this phenomenon i	s the need to prov	cess and ev		Z,ZK	5 be course
	ent types of camera systems and a variety of methods for image and video processing.					
	e graduates may encounter.					
	earching the Web and Multimedia Databases v about search techniques in the web environment that is interpreted as a very large di	atributed and bate		1	Z,ZK	5
•	n about search techniques in the web environment that is interpreted as a very large of n about search techniques in text and hypertext documents (the web pages themselve:		•	0	•	
	ch in multimedia databases (generally in collections of unstructured data). They also lear	n techniques for p	programming	y web searcl	n engines for th	e mentioned
data types (documents). BI-ZNS.21 Kr	nowledge-based Systems				Z,ZK	5
	ar with the systems based on knowledge (knowledge-based systems), which are system	ms that usetechni	ques of artif			
	arning and reasoning from findingsand actions. The course introduces students to the			-	-based system	is to suppor
decision-makingand plannir	ng. The course assumes knowledge of set theory, probability theory, artificial neural net	works, and evolut	lionary algoi	ntnms.		
Name of the bloc	ck: Povinná t lesná výchova, sportovní kurzy					
	of credits of the block: 0					
The role of the b						
Code of the grou	In' BI-PT 24					
•	up: Physical Education, version 2024					
•	dits in the group:					
•	urses in the group. In this group you have to comple	ata at laas	t 2 cou	rede (r	at most	7)
Credits in the gro		כוב מו ובמט	ι <u>2</u> 000	1303 (0)
•	•	sefully comp	ete two	CULLEDE	of this are	un
Note on the grou		Souny compi		0001353	or and gro	ωp.

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
TV1	Physical Education	Z	0	0+2	Z	PT
TVV	Physical education	Z	0	0+2	Z,L	PT
TVK1	Physical Education Luboš Neuman Ji í Drnek (Gar.)	Z	1		L,Z	PT
TVV0	Physical education	Z	0	0+2	Z,L	PT
TV2	Physical Education	Z	0	0+2	L	PT
TVKZV	Physical Education Course	Z	0	7dní	Z	PT
TVKLV	Physical Education Course	Z	0	7dní	L	PT

Characteristics of the courses of this group of Study Plan: Code=BI-PT.24 Name=Physical Education, version 2024

Physical Education	Z	0
Physical education	Z	0
Physical Education	Z	1
Physical education	Z	0
Physical Education	Z	0
Physical Education Course	Z	0
Physical Education Course	Z	0
	Physical education Physical Education Physical education Physical Education Physical Education Physical Education Physical Education	Physical educationZPhysical EducationZPhysical educationZPhysical EducationZPhysical EducationZPhysical Education CourseZ

Name of the block: Povinná zkouška z angli tiny Minimal number of credits of the block: 2 The role of the block: PJ

Code of the group: BI-ZKA.21

Name of the group: English Language Exam

Requirement credits in the group: In this group you have to gain at least 2 credits (at most 4)

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

Credits in the group: 2

Note on the group: BI-ANG, ending with an exam for two credits, is enrolled by students who have completed preparator English courses and have a credit from the BI-A2L course.
--
server and have a credit from the BI-A2L course.
--
--
BI-ANG1, ending with an exam for two credits, is enrolled by students who prepared for the exam independently and do not have credit from BI-A2L. These students must complete a credit paper before their own exam. After passing the exam, the student will also be recognized for the course BI-ANGS (Independent preparation for the English exam) for 2 credits.

The BIE-ECC course can be recognized for any active semester after the submission of a external certificate at the level of at least B2 according to the Common European Framework of Reference.

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-ANG1	English Language Examination without Preparatory Courses Kate ina Valentová Kate ina Valentová Kate ina Valentová (Gar.)	Z,ZK	2	2D	L	PJ
BIE-EEC	English language external certificate Zden k Muziká Zden k Muziká Zden k Muziká (Gar.)	Z	4	2D	L	PJ
BI-ANG	English Language, Internal Certificate Kate ina Valentová Kate ina Valentová Kate ina Valentová (Gar.)	ZK	2	2D	Z,L	PJ

Characteristics of the courses of this group of Study Plan: Code=BI-ZKA.21 Name=English Language Exam

BI-ANG1	English Language Examination without Preparatory Courses	Z,ZK	2			
BIE-EEC	English language external certificate	Z	4			
The BIE-ECC course of	The BIE-ECC course can be recognized for any active semester after the submission of a certificate certificate that demonstrates their proficiency in English comparable to or exceeding					
the B2 level of the Cor	nmon European Framework of Reference for Languages.					
BI-ANG	English Language, Internal Certificate	ZK	2			
Course information and teaching materials can be found at https://moodle-vyuka.cvut.cz/course/search.php?search=BI-ANG						

Name of the block: Elective courses Minimal number of credits of the block: 0 The role of the block: V

Code of the group: BI-V.2021

Name of the group: Purely Elective Courses of Bachelor Programme Informatics, version from 2021/22 till 2024/25

Requirement credits in the group:

Requirement courses in the group:

Credits in the group: 0 Note on the group:

Note on the grou						
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-ADW.1	Windows Administration Ji í Kašpar, Miroslav Prágl Miroslav Prágl (Gar.)	Z,ZK	4	2P+1C	Z	V
BI-ALO	Algebra and Logic Jan Starý Jan Starý Jan Starý (Gar.)	Z,ZK	4	2P+1C	L	V
BI-AVI.21	Algorithms visually Lud k Ku era Lud k Ku era (Gar.)	Z,ZK	4	2P+1C	L	V
BI-A2L	English language, preparation for the B2 level exam Kate ina Valentová Kate ina Valentová Kate ina Valentová (Gar.)	Z	2	2C	L	V
BI-APJ	Aplication Programming in Java Ji í Dan ek	Z,ZK	4	2P+1R+1C	Z	V
NI-AFP	Applied Functional Programming Robert Pergl, Marek Suchánek, Daniel N mec Robert Pergl Robert Pergl (Gar.)	κz	5	2P+1C	L	V
BIE-ZUM	Artificial Intelligence Fundamentals Pavel Surynek	Z,ZK	4	2P+2C	L	V
BI-BLE	Blender Lukáš Ba inka Lukáš Ba inka Lukáš Ba inka (Gar.)	Z,ZK	4	2P+2C	L	V
NI-DSP	Database Systems in Practes Tomáš Vichta Tomáš Vichta Tomáš Vichta (Gar.)	Z,ZK	4	2P+1C	L	V
BI-STO	Storage and Filesystems	Z,ZK	4	2P+2C	L,Z	V
NI-PSD	Public Services Design David Pešek, Ond ej Brém David Pešek Ond ej Brém (Gar.)	КZ	4	1P+2C		V
BIE-DIF	Differential equations Antonella Marchesiello, Jan Valdman, Ond ej Bouchala Tomáš Kalvoda Ond ej Bouchala (Gar.)	Z,ZK	5	2P+2C	L	V
NI-DZO	Digital Image Processing	Z,ZK	4	2P+1C	L	V
NI-DDM	Distributed Data Mining	KZ	4	3C	L	V
BI-EP1.24	Effective programming 1 Martin Ka er Martin Ka er Martin Ka er (Gar.)	KZ	4	2P+2C	Z	V
BI-EP2	Efficient Programming 2 Martin Ka er Martin Ka er Martin Ka er (Gar.)	KZ	4	2P+2C	L	V
BI-ANGK	English language, contact preparation for the B2 level exam Kate ina Valentová Kate ina Valentová (Gar.)	Z	2	2C	Z,L	V
BI-EJA	Enterprise Java Ji í Dan ek	Z,ZK	4	2P+2C	L	V
BI-EJK	Enterprise Java and Kotlin Jií Dan ek Jií Dan ek Jií Dan ek (Gar.)	Z,ZK	4	2P+2C	L	V
BI-FMU	Financial and Management Accounting David Buchtela	Z,ZK	5	2P+2C	Z	V
BI-HAM	HW accelerated network traffic monitoring Tomáš ejka, Karel Hynek Tomáš ejka Tomáš ejka (Gar.)	ΚZ	4	2P+1C	L	V
BI-HMI	History of Mathematics and Informatics Alena Šolcová Alena Šolcová (Gar.)	Z,ZK	3	2P+1C	L	V
BI-ARD	Interactive applications on Arduino Jan ezní ek, Ji í Cvr ek, Robert Hülle, Vojt ch Miškovský Robert Hülle Robert Hülle (Gar.)	КZ	4	3C	L	V
NI-IAM	Internet and Multimedia Ji í Melnikov	Z,ZK	4	2P+1C	L	V
BIE-CSI	Introduction to Computer Science Christoph Kirsch Christoph Kirsch (Gar.)	Z	2	2C	Z	V
FITE-EHD	Introduction to European Economic History Tomáš Evan	Z,ZK	3	2P+1C	L	V
BIE-IMA2	Introduction to Mathematics 2 Karel Klouda	Z	2	1C	Z	V
BI-CS2	C# language and data access Pavel Št pán Pavel Št pán Pavel Št pán (Gar.)	КZ	4	0P+3C	Z	V
BI-CS3	Language C# - design of web applications Pavel Št pán Pavel Št pán Pavel Št pán (Gar.)	KZ	4	3C	Z	V
BI-SQL.1	Language SQL, advanced Michal Valenta Michal Valenta (Gar.)	КZ	4	3C	L	V
BI-QAP	Quantum algorithms and programming Tomáš Kalvoda, Ivo Petr Ivo Petr (Ivo Petr (Gar.)	КZ	5	1P+2C	Z	V

NI-LSM	Statistical Modelling Lab Kamil Dedecius Kamil Dedecius (Gar.)	KZ	5	3C	L	V
BI-HAS	Human Aspects in Cryptography and Security Ivana Trummová Ivana Trummová Ivana Trummová (Gar.)	Z,ZK	5	2P+1C	Z	V
NI-MPL	Managerial Psychology Jan Fiala Jan Fiala Jan Fiala (Gar.)	ZK	2	2P	Z,L	V
NI-MSI	Mathematical Structures in Computer Science	Z,ZK	4	2P+1C	L	V
BI-MPP.21	Methods of interfacing peripheral devices Miroslav Skrbek Miroslav Skrbek Miroslav Skrbek (Gar.)	Z,ZK	5	2P+2C	Z	V
BI-MIT	Mikrotik technologies Jan Fest Jan Fest Jan Fest (Gar.)	KZ	3	1P+2C	Z	V
NI-MOP	Modern Object-Oriented Programming in Pharo Jan Blizni enko Robert Pergl Robert Pergl (Gar.)	KZ	4	3C	Z	V
BI-MVT.21	Modern Visualisation Technologies Ji í Chludil, Petr Pauš Petr Pauš Petr Pauš (Gar.)	Z,ZK	5	2P+2C	Z	V
BI-MMP	Multimedia team project Zde ka echová Zde ka echová Zde ka echová (Gar.)	KZ	4	3C	Z,L	V
BI-ORL	Operations Research and Linear Programming Dušan Knop Dušan Knop Dušan Knop (Gar.)	KZ	5	1P+2C	L	V
NI-OLI	Linux Drivers Miroslav Skrbek, Jaroslav Borecký Jaroslav Borecký Miroslav Skrbek (Gar.)	Z,ZK	4	2P+2C	L	V
BI-ACM	Programming Practices 1 Tomáš Valla Tomáš Valla Tomáš Valla (Gar.)	KZ	5	4C	L	V
FIT-ACM1	Programming Practices 1 Tomáš Valla	KZ	5	4C	L	V
FIT-ACM2	Programming Practices 2 Ond ej Suchý	KZ	5	4C	Z	V
BI-ACM2	Programming Practices 2 Ond ej Suchý, Tomáš Valla Tomáš Valla Tomáš Valla (Gar.)	KZ	5	4C	Z	V
FIT-ACM3	Programming Practices 3 Ond ej Suchý	KZ	5	4C	L	V
BI-ACM3	Programming Practices 3 Ond ej Suchý, Tomáš Valla Tomáš Valla Tomáš Valla (Gar.)	KZ	5	4C	L	V
FIT-ACM4	Programming Practices 4 Ond ej Suchý	KZ	5	4C	Z	V
BI-ACM4	Programming Practices 4 Ond ej Suchý, Tomáš Valla Tomáš Valla Ond ej Suchý (Gar.)	KZ	5	4C	Z	V
FIT-ACM5	Programming Practices 5 Ond ej Suchý	KZ	5	4C	L	V
FIT-ACM6	Programming Practices 6 Ond ej Suchý	KZ	5	4C	L	V
BI-AND.21	Programming for the Android Operating System Jan Mottl, Jan Vep ek, Marek Kodr, Petr Šíma Jan Mottl Marek Kodr (Gar.)	KZ	4	3C	L	V
BI-CS1	Programming in C# Pavel Št pán, Helena Wallenfelsová Helena Wallenfelsová Pavel Št pán (Gar.)	KZ	4	3C	L,Z	v
BI-PJV	Programming in Java Miroslav Balík, Jan Blizni enko, Ji í Borský, Jan Zimolka Miroslav Balík Miroslav Balík (Gar.)	Z,ZK	4	2P+2C	Z,L	V
BI-PJS.1	JavaScript Programming Old ich Malec	KZ	4	3C	L	V
BI-KOT	Programing in Kotlin Jií Dan ek Jií Dan ek Jií Dan ek (Gar.)	Z,ZK	4	2P+2C	L	V
NI-PSL	Programming in Scala Jií Dan ek Jií Dan ek Jií Dan ek (Gar.)	Z,ZK	4	2P+1C	Z	V
BI-PMA	Programming in Mathematica Zden k Buk Zden k Buk Zden k Buk (Gar.)	Z,ZK	4	2P+2C	Z,L	V
BI-PHP.1	Programing in PHP	KZ	4	3C	Z	V
BI-PS2	Programming in shell 2 Lukáš Ba inka	Z,ZK	4	2P+2C	L	V
NI-PDD	Data Preprocessing Marcel Ji ina Marcel Ji ina Marcel Ji ina (Gar.)	Z,ZK	5	2P+1C	Z	V
BI-PKM	Introduction to mathematics Tomáš Kalvoda Tomáš Kalvoda (Gar.)	Z	4		Z	V
NI-REV	Reverse Engineering Josef Kokeš Josef Kokeš Josef Kokeš (Gar.)	Z,ZK	5	1P+2C	Z	V
BI-SCE1	Computer Engineering Seminar I Hana Kubátová Hana Kubátová (Gar.)	Z	4	2C	L,Z	V
BI-SCE2	Computer Engineering Seminar II Hana Kubátová Hana Kubátová (Gar.)	Z	4	2C	L,Z	V
BI-ST1	Network Technology 1 Alexandru Moucha Alexandru Moucha (Gar.)	Z	3	2C	Z	V
BI-ST2	Network Technology 2 Alexandru Moucha Alexandru Moucha (Gar.)	Z	3	3C	L	v

BI-ST3	Network Technology 3 Alexandru Moucha Alexandru Moucha (Gar.)	Z	3	2C	Z	V
BI-ST4	Network Technology 4 Alexandru Moucha Alexandru Moucha (Gar.)	Z	3	2C	L	V
BI-SKJ.21	Scripting Languages Lukáš Ba inka, Jan Ž árek Lukáš Ba inka Jan Ž árek (Gar.)	Z,ZK	4	2+2	L	v
BI-SOJ	Machine Oriented Languages	Z,ZK	4	2P+2C	L	v
FIT-SEP	World Economy and Business Tomáš Evan	Z,ZK	4	2P+2C	L	v
BI-SEP	World Economy and Business Tomáš Evan Tomáš Evan Tomáš Evan (Gar.)	Z,ZK	4	2P+2C	L	V
NI-SYP	Parsing and Compilers Jan Janoušek Jan Janoušek Jan Janoušek (Gar.)	Z,ZK	5	2P+1C	Z	V
BI-GIT	Version control system GIT	KZ	2	16P	Z,L	V
BIE-SEG	Petr Pulc Systems Engineering	Z	0	2C	Z	V
TVK1	Christoph Kirsch Christoph Kirsch Christoph Kirsch (Gar.) Physical Education	Z	1		L,Z	V
TVV	Luboš Neuman Ji í Drnek (Gar.) Physical education	Z	0	0+2	Z,L	v
TV1	Physical Education	Z	0	0+2	Z	V
TVV0	Physical education	Z	0	0+2	 Z,L	v
TV2	Physical Education	 Z	0	0+2	,_ L	v
TV2K1	Physical Education 2	Z	1		L,Z	v
TVKLV	Physical Education Course	Z	0	7dní	, L	v
TVKZV	Physical Education Course	Z	0	7dní	Z	v
BI-TS1	Theoretical Seminar I	Z	4	2C	Z	V
BI-TS2	Dušan Knop, Ond ej Suchý, Tomáš Valla Tomáš Valla Tomáš Valla (Gar.) Theoretical Seminar II Dušan Knop, Ond ej Suchý, Tomáš Valla Tomáš Valla Ond ej Suchý (Gar.)	Z	4	2C	L	V
BI-TS3	Theoretical Seminar III Ond ej Suchý, Tomáš Valla Tomáš Valla (Gar.)	Z	4	2C	Z	V
BI-TS4	Theoretical Seminar IV Ond ej Suchý, Tomáš Valla Tomáš Valla Tomáš Valla (Gar.)	Z	4	2C	L	V
BI-TDA	Test driven architecture Marek Hakala	KZ	4	2P+1C	Z,L	V
NI-TSP	Marek Hakala Testing and Reliability Petr Fišer Martin Da Petr Fišer (Gar.)	Z,ZK	5	2P+2C	Z	V
BI-QUA	Quality Assurance Marek Kodr, Martin Pilný, Kate ina Kalášková Kate ina Kalášková Marek Kodr (Gar.)	KZ	4	3C	Z	v
FI-TOP	Academic writing Tomáš Nová ek	Z	2	10B	Z	V
BI-CCN	Compiler Construction Christoph Kirsch Christoph Kirsch (Gar.)	Z,ZK	5	2P+1C	L	V
BI-TEX	TeX and Typography Petr Olšák Petr Olšák (Gar.)	Z,ZK	4	2P+1C	L	V
BI-EHD	Introduction to European Economic History Tomáš Evan Tomáš Evan Tomáš Evan (Gar.)	Z,ZK	3	2P+1C	Z,L	V
BI-KSA	Cultural and Social Anthropology Tomáš Houdek, Alena Libánská, Jakub Šenovský Jakub Šenovský Alena Libánská (Gar.)	ZK	2	2P	Z,L	v
BI-ULI	Introduction to Linux Zden k Muziká, Petr Zemánek, Jan Ž árek Zden k Muziká Zden k Muziká (Gar.)	Z	2	4D	Z	V
BI-OPT	Introduction to Optical Networks Pavel Tvrdík	Z,ZK	4	2P+1C	Z	V
NI-VCC	Virtualization and Cloud Computing Tomáš Vondra, Jan Fesl Tomáš Vondra Tomáš Vondra (Gar.)	Z,ZK	5	2P+1C	L	V
BI-VHS	Virtual game worlds Radek Richtr	ZK	4	2P+2C	Z	V
BI-VR1	Virtual reality I Petr Pauš, Petr Klán Petr Klán Petr Klán (Gar.)	KZ	4	2P+2C	L,Z	V
BI-VR2	Virtual reality II Petr Klán Petr Klán Petr Klán (Gar.)	KZ	3	1P+2C	L	V
BI-VAK.21	Selected Applications of Combinatorics Michal Opler Michal Opler Michal Opler (Gar.)	Z	3	2R	L	V
BI-VMM	Selected Mathematical Methods Marzieh Forough Tomáš Kalvoda Tomáš Kalvoda (Gar.)	Z,ZK	4	2P+2C	L	V
NI-VYC	Computability Jan Starý Jan Starý (Gar.)	Z,ZK	4	2P+2C	L	V
BI-ZS10	Bachelor internship abroad for 10 credits Zden k Muziká Zden k Muziká (Gar.)	Z	10		Z,L	v

BI-ZS20	Bachelor internship abroad for 20 credits Zden k Muziká Zden k Muziká (Gar.)	Z	20		Z,L	V
BI-ZS30	Bachelor internship abroad for 30 credits Zden k Muziká Zden k Muziká (Gar.)	Z	30		Z,L	V
BI-ZIVS	Intelligent Embedded System Fundamentals Miroslav Skrbek Miroslav Skrbek Miroslav Skrbek (Gar.)	KZ	4	1P+3C	Z	V
BI-ZPI	Process engineering Robert Pergl Robert Pergl (Gar.)	KZ	4	1P+2C	L	V
BI-ZNF PHP Framework Nette - basics KZ 3 2					L	V
BI-IOS	Fundamentals of iOS Application Development for iPhone and iPad Rostislav Babá ek, Igor Rosocha Martin P Ipitel Martin P Ipitel (Gar.)	ΚZ	4	2C	Z	v
BI-ZWU	J Introduction to Web and User Interfaces Lukáš Ba inka Lukáš Ba inka Jakub Klímek (Gar.) Z,ZK 4 2P				L	V
BI-3DT.1	3D Printing Miroslav Hron ok, Tomáš Sýkora Tomáš Sýkora Miroslav Hron ok (Gar.)	KZ	4	3C	L	V
	of the courses of this group of Study Plan: Code=BI-V.2021 Name=P	urely Electiv	e Cours	es of Bac	helor Pro	ogramme
	sion from 2021/22 till 2024/25			1	-	
TV1	Physical Education				Z	0
TVV	Physical education				Z	0
TVK1	Physical Education				Z	1
TVV0	Physical education				Z	0
TV2	Physical Education				Z	0
TVKZV	Physical Education Course				Z	0
TVKLV	Physical Education Course				Z	0
BI-ADW.1	Windows Administration			Z	,ZK	4
This course is preser	nted in Czech. However, there is an English variant in the program Informatics (B1801 / 4753).			I	, 1	
BI-ALO	Algebra and Logic			Z	,ZK	4
-	and deepens the study of topics touched upon in the basic course in logic.			· · ·	·,	•
The course complem	Algorithms visually nents other algorithm courses at FIT. It brings knowledge about particular important algorithms f d in BI-AG1 and BI-AG2. A wide scope of covered subject is made possible due to using visualization			nputer scienc		
knowledge presented that make understand BI-A2L	Algorithms visually nents other algorithm courses at FIT. It brings knowledge about particular important algorithms f d in BI-AG1 and BI-AG2. A wide scope of covered subject is made possible due to using visualization inding the principles of algorithms easy. English language, preparation for the B2 level exam	n bz Algovision (www.algovis	nputer scienc sion.org <htt< td=""><td>ce that exten p://www.algo Z</td><td>d substantia ovision.org&g 2</td></htt<>	ce that exten p://www.algo Z	d substantia ovision.org&g 2
The course complem knowledge presented that make understand BI-A2L The content of the co active part in the lang tests with the succes	Algorithms visually nents other algorithm courses at FIT. It brings knowledge about particular important algorithms f d in BI-AG1 and BI-AG2. A wide scope of covered subject is made possible due to using visualization red ing the principles of algorithms easy.	n bz Algovision (urse credit. Acad nentation Paper.	www.algovis demic Achie -Succeed in	nputer scienc sion.org <htt evement - stu n both the mic</htt 	ze that exten p://www.algo Z dents are du dents are du	d substantia ovision.org&g 2 ue to: -Take a e final term
The course complem knowledge presented that make understand BI-A2L The content of the co active part in the lang tests with the succes class of the term. BI-APJ	Algorithms visually nents other algorithm courses at FIT. It brings knowledge about particular important algorithms f d in BI-AG1 and BI-AG2. A wide scope of covered subject is made possible due to using visualization ding the principles of algorithms easy. English language, preparation for the B2 level exam ourse corresponds to the preparation for the English exam at the B2 level. Requirements for co guage instructionMeet the requirements for writing assignments - Summary, Abstract, Argun ss rate set at 70%80% and over in BOTH tests means ORAL EXAM ONLY (no written part). F Aplication Programming in Java	n bz Algovision (urse credit. Acad nentation Paper.	www.algovis demic Achie -Succeed in	mputer scienc sion.org <htt evement - stu h both the mic ed by individu</htt 	ze that exten p://www.algo Z dents are du dents are du	d substantia ovision.org&g 2 ue to: -Take a e final term
The course complem knowledge presented that make understand BI-A2L The content of the co active part in the lang tests with the succes class of the term. BI-APJ This course is preser	Algorithms visually nents other algorithm courses at FIT. It brings knowledge about particular important algorithms f d in BI-AG1 and BI-AG2. A wide scope of covered subject is made possible due to using visualization in the principles of algorithms easy. English language, preparation for the B2 level exam ourse corresponds to the preparation for the English exam at the B2 level. Requirements for cc guage instructionMeet the requirements for writing assignments - Summary, Abstract, Argurnes are set at 70%80% and over in BOTH tests means ORAL EXAM ONLY (no written part). F Aplication Programming in Java nted in Czech. Advanced technologies in Java.	n bz Algovision (urse credit. Acad nentation Paper.	www.algovis demic Achie -Succeed in	nputer scienc sion.org <htt evement - stu n both the mic ed by individu</htt 	Z dents are du dets are du determ and the lal teachers	d substantia vvision.org&g 2 ue to: -Take a le final term during the fin 4
The course complem knowledge presented that make understand BI-A2L The content of the co active part in the lang tests with the succes class of the term. BI-APJ This course is preser NI-AFP	Algorithms visually nents other algorithm courses at FIT. It brings knowledge about particular important algorithms f d in BI-AG1 and BI-AG2. A wide scope of covered subject is made possible due to using visualization in the principles of algorithms easy. English language, preparation for the B2 level exam ourse corresponds to the preparation for the English exam at the B2 level. Requirements for cc guage instructionMeet the requirements for writing assignments - Summary, Abstract, Argunres rate set at 70%80% and over in BOTH tests means ORAL EXAM ONLY (no written part). F Aplication Programming in Java nted in Czech. Advanced technologies in Java.	n bz Algovision (urse credit. Acad nentation Paper. Requirements wil	www.algovis demic Achie -Succeed in Il be specifie	mputer science sion.org <htt evement - stu n both the mice ed by individu</htt 	Z dents are du dents are du dterm and the lal teachers Z,ZK KZ	d substantia vision.org&g 2 ue to: -Take a e final term during the fi 4 5
The course complem knowledge presented that make understand BI-A2L The content of the co active part in the lang tests with the succes class of the term. BI-APJ This course is preser NI-AFP This course is preser the rise nowadays an	Algorithms visually ents other algorithm courses at FIT. It brings knowledge about particular important algorithms f d in BI-AG1 and BI-AG2. A wide scope of covered subject is made possible due to using visualization ding the principles of algorithms easy. English language, preparation for the B2 level exam ourse corresponds to the preparation for the English exam at the B2 level. Requirements for correguage instructionMeet the requirements for writing assignments - Summary, Abstract, Argun as rate set at 70%80% and over in BOTH tests means ORAL EXAM ONLY (no written part). F Aplication Programming in Java Applied Functional Programming In Czech. Functional programming represents one of the traditional programming paradig In Czech. Functional programming represents one of the traditionally imperative language	n bz Algovision (urse credit. Acad lentation Paper. Requirements wil	www.algovis demic Achie -Succeed in Il be specifie nd novel fun	mputer science sion.org <htt evement - stu b both the mice ed by individu Z nctional progr</htt 	ze that exter p://www.algo dents are du dterm and th lal teachers 2,ZK	d substantia vision.org&g 2 ue to: -Take a le final term during the fin 4 5 guages are o
The course complem knowledge presented that make understand BI-A2L The content of the co active part in the lang tests with the succes class of the term. BI-APJ This course is preser NI-AFP This course is preser the rise nowadays ar necessary competen	Algorithms visually nents other algorithm courses at FIT. It brings knowledge about particular important algorithms f d in BI-AG1 and BI-AG2. A wide scope of covered subject is made possible due to using visualization ding the principles of algorithms easy. English language, preparation for the B2 level exam ourse corresponds to the preparation for the English exam at the B2 level. Requirements for correguage instructionMeet the requirements for writing assignments - Summary, Abstract, Argunts are set at 70%80% and over in BOTH tests means ORAL EXAM ONLY (no written part). F Aplication Programming in Java Applied Functional Programming nted in Czech. Functional programming represents one of the traditional programming paradig nd the functional paradigm becomes an important construct of traditionally imperative language need in software engineer: the theory and especially the practice.	n bz Algovision (urse credit. Acad lentation Paper. Requirements wil	www.algovis demic Achie -Succeed in Il be specifie nd novel fun	mputer science sion.org <htt evement - stu h both the mice ed by individu Z nctional progr , mastering th</htt 	ze that exter p://www.algo dents are du tterm and th ial teachers Z,ZK	d substantia vision.org&g 2 ue to: -Take a le final term during the fi 4 5 guages are o
The course complem knowledge presented that make understand BI-A2L The content of the co active part in the lang tests with the succes class of the term. BI-APJ This course is preser NI-AFP This course is preser the rise nowadays ar necessary competen BIE-ZUM Students are introduc space search, multi-a	Algorithms visually ents other algorithm courses at FIT. It brings knowledge about particular important algorithms f d in BI-AG1 and BI-AG2. A wide scope of covered subject is made possible due to using visualization iding the principles of algorithms easy. English language, preparation for the B2 level exam ourse corresponds to the preparation for the English exam at the B2 level. Requirements for correguage instructionMeet the requirements for writing assignments - Summary, Abstract, Argum as rate set at 70%80% and over in BOTH tests means ORAL EXAM ONLY (no written part). F Aplication Programming in Java nted in Czech. Advanced technologies in Java. Applied Functional Programming nted in Czech. Functional programming represents one of the traditional programming paradig nd the functional paradigm becomes an important construct of traditionally imperative language nce of a software engineer: the theory and especially the practice. Artificial Intelligence Fundamentals ced to the fundamental problems in the Artificial Intelligence, and the basic methods for their so agent systems, game theory, planning, and machine learning. Modern soft-computing methods	n bz Algovision (urse credit. Acad lentation Paper. Requirements wi ms. Traditional at es (C++, C#, Jav	www.algovis demic Achie -Succeed in I be specifie nd novel fun ra). As such mainly on th	mputer science sion.org <htt evement - stu n both the mid ed by individu Z nctional progr , mastering th Z e classical ta</htt 	ze that exter p://www.algo dents are du tterm and th al teachers C,ZK	d substantia vision.org&g 2 ue to: -Take a e final term during the fi 4 5 guages are o becomes a 4 e areas of sta
The course complem knowledge presented that make understand BI-A2L The content of the co active part in the lang tests with the succes class of the term. BI-APJ This course is preser NI-AFP This course is preser the rise nowadays ar necessary competen BIE-ZUM Students are introduc space search, multi- appersented as well	Algorithms visually ents other algorithm courses at FIT. It brings knowledge about particular important algorithms f d in BI-AG1 and BI-AG2. A wide scope of covered subject is made possible due to using visualization ding the principles of algorithms easy. English language, preparation for the B2 level exam ourse corresponds to the preparation for the English exam at the B2 level. Requirements for corresponds to the preparation for the English exam at the B2 level. Requirements for corresponds to the requirements for writing assignments - Summary, Abstract, Argum as rate set at 70%80% and over in BOTH tests means ORAL EXAM ONLY (no written part). F Aplication Programming in Java Inted in Czech. Advanced technologies in Java. Applied Functional Programming not d in Czech. Functional programming represents one of the traditional programming paradig net of a software engineer: the theory and especially the practice. Artificial Intelligence Fundamentals ced to the fundamental problems in the Artificial Intelligence, and the basic methods for their so agent systems, game theory, planning, and machine learning. Modern soft-computing methods I.	n bz Algovision (urse credit. Acad lentation Paper. Requirements wi ms. Traditional at es (C++, C#, Jav	www.algovis demic Achie -Succeed in I be specifie nd novel fun ra). As such mainly on th	mputer science sion.org <htt evement - stu both the mice ed by individu Z nctional progr , mastering th Z e classical ta algorithms ar</htt 	ze that exter p://www.algo Z dents are du tterm and th al teachers Z,ZK KZ amming lan nis paradign Z,ZK sks from the id the neura	d substantia vision.org&g 2 ue to: - Take a le final term during the fin 4 5 guages are o h becomes a 4 e areas of sta I networks, v
The course complem knowledge presented that make understand BI-A2L The content of the co active part in the lang tests with the succes class of the term. BI-APJ This course is preser NI-AFP This course is preser the rise nowadays ar necessary competen BIE-ZUM Students are introduc space search, multi- pe presented as well BI-BLE	Algorithms visually ents other algorithm courses at FIT. It brings knowledge about particular important algorithms f d in BI-AG1 and BI-AG2. A wide scope of covered subject is made possible due to using visualization ding the principles of algorithms easy. English language, preparation for the B2 level exam ourse corresponds to the preparation for the English exam at the B2 level. Requirements for correguage instructionMeet the requirements for writing assignments - Summary, Abstract, Argum ss rate set at 70%80% and over in BOTH tests means ORAL EXAM ONLY (no written part). F Aplication Programming in Java nted in Czech. Advanced technologies in Java. Applied Functional Programming net of in Czech. Functional programming represents one of the traditional programming paradig nce of a software engineer: the theory and especially the practice. Artificial Intelligence Fundamentals ced to the fundamental problems in the Artificial Intelligence, and the basic methods for their so agent systems, game theory, planning, and machine learning. Modern soft-computing methods I. Blender	n bz Algovision (urse credit. Acad entation Paper. Requirements wi ms. Traditional at es (C++, C#, Jav lving. It focuses r , including the er	www.algovis demic Achie -Succeed in I be specifie nd novel fun ra). As such mainly on th volutionary a	mputer science sion.org <htt evement - stu both the mice ad by individu Z nctional progr , mastering th Z e classical ta algorithms ar</htt 	The that exter p://www.algo Z dents are du dents are du term and th al teachers Z,ZK KZ amming lan nis paradign z,ZK sks from the id the neura Z,ZK	d substantia vision.org&g 2 ue to: - Take a le final term during the fi 4 5 guages are o becomes a 4 a reas of sta I networks, v 4
The course complem knowledge presented that make understand BI-A2L The content of the co active part in the lang tests with the succes class of the term. BI-APJ This course is preser NI-AFP This course is preser the rise nowadays ar necessary competen BIE-ZUM Students are introduc space search, multi- active presented as well BI-BLE The course extends F	Algorithms visually ents other algorithm courses at FIT. It brings knowledge about particular important algorithms f d in BI-AG1 and BI-AG2. A wide scope of covered subject is made possible due to using visualization ding the principles of algorithms easy. English language, preparation for the B2 level exam ourse corresponds to the preparation for the English exam at the B2 level. Requirements for correguage instructionMeet the requirements for writing assignments - Summary, Abstract, Argum ss rate set at 70%80% and over in BOTH tests means ORAL EXAM ONLY (no written part). F Aplication Programming in Java Inted in Czech. Advanced technologies in Java. Applied Functional Programming Inted in Czech. Functional programming represents one of the traditional programming paradig nd the functional paradigm becomes an important construct of traditionally imperative language ce of a software engineer: the theory and especially the practice. Artificial Intelligence Fundamentals ced to the fundamental problems in the Artificial Intelligence, and the basic methods for their so agent systems, game theory, planning, and machine learning. Modern soft-computing methods I. Blender knowledge of opensource program Blender from BI-MGA (Multimedia and Graphics Application)	n bz Algovision (urse credit. Acad entation Paper. Requirements wi ms. Traditional an es (C++, C#, Jav lving. It focuses r , including the er	www.algovis demic Achie -Succeed in I be specifie nd novel fun ra). As such mainly on th volutionary a ntended for	mputer science sion.org <htt evement - stu both the mice ed by individu Z nctional progr , mastering th Z e classical ta algorithms ar Z those interest</htt 	ze that exter p://www.algo Z dents are du dterm and th ial teachers Z,ZK KZ amming lan nis paradigm Z,ZK ks from the id the neura Z,ZK sks from the id the neura Z,ZK	d substantia vision.org&g 2 ue to: -Take a e final term during the fi 4 5 guages are o h becomes a 4 e areas of sta I networks, v 4 raphics and
The course complem knowledge presented that make understand BI-A2L The content of the co active part in the lang tests with the succes class of the term. BI-APJ This course is preser NI-AFP This course is preser the rise nowadays ar necessary competen BIE-ZUM Students are introduc space search, multi- active presented as well BI-BLE The course extends be animation. It offers a	Algorithms visually ents other algorithm courses at FIT. It brings knowledge about particular important algorithms f d in BI-AG1 and BI-AG2. A wide scope of covered subject is made possible due to using visualization ding the principles of algorithms easy. English language, preparation for the B2 level exam ourse corresponds to the preparation for the English exam at the B2 level. Requirements for corresponds to the preparation for the tenglish exam at the B2 level. Requirements for corresponds to the requirements for writing assignments - Summary, Abstract, Argum ss rate set at 70%80% and over in BOTH tests means ORAL EXAM ONLY (no written part). F Aplication Programming in Java nted in Czech. Advanced technologies in Java. Applied Functional Programming nted in Czech. Functional programming represents one of the traditional programming paradig nd the functional paradigm becomes an important construct of traditionally imperative language red of a software engineer: the theory and especially the practice. Artificial Intelligence Fundamentals ced to the fundamental problems in the Artificial Intelligence, and the basic methods for their so agent systems, game theory, planning, and machine learning. Modern soft-computing methods l. Blender knowledge of opensource program Blender from Bl-MGA (Multimedia and Graphics Applicatio complete and practically oriented introduction to Blender environment. Students may continue	n bz Algovision (urse credit. Acad entation Paper. Requirements wi ms. Traditional an es (C++, C#, Jav lving. It focuses r , including the er	www.algovis demic Achie -Succeed in I be specifie nd novel fun ra). As such mainly on th volutionary a ntended for	mputer science sion.org <htt evement - stu both the mice ad by individu Z nctional progr , mastering th e classical ta algorithms ar Z those interes raphics appli</htt 	The that exter p://www.algo Z dents are du dents are du term and the al teachers Z,ZK KZ amming lan nis paradigm Z,ZK Sks from the ad the neura Z,ZK sted in 3D g cations) court	d substantia vision.org& 2 ue to: -Take - te final term during the fi 4 5 guages are b becomes a 4 e areas of sta l networks, v 4 raphics and rse.
The course complem knowledge presented that make understand BI-A2L The content of the co active part in the lang ests with the succes class of the term. BI-APJ This course is preser NI-AFP This course is preser the rise nowadays ar necessary competen BIE-ZUM Students are introduc space search, multi-ac be presented as well BI-BLE The course extends be animation. It offers a NI-DSP	Algorithms visually ents other algorithm courses at FIT. It brings knowledge about particular important algorithms f d in BI-AG1 and BI-AG2. A wide scope of covered subject is made possible due to using visualization ding the principles of algorithms easy. English language, preparation for the B2 level exam ourse corresponds to the preparation for the English exam at the B2 level. Requirements for corresponds to the preparation for the tenglish exam at the B2 level. Requirements for corresponds to the requirements for writing assignments - Summary, Abstract, Argum as rate set at 70%80% and over in BOTH tests means ORAL EXAM ONLY (no written part). F Application Programming in Java Inted in Czech. Advanced technologies in Java. Applied Functional Programming in Czech. Functional programming represents one of the traditional programming paradig inter functional paradigm becomes an important construct of traditionally imperative language ince of a software engineer: the theory and especially the practice. Artificial Intelligence Fundamentals ced to the fundamental problems in the Artificial Intelligence, and the basic methods for their so agent systems, game theory, planning, and machine learning. Modern soft-computing methods l. Blender knowledge of opensource program Blender from BI-MGA (Multimedia and Graphics Applicatio complete and practically oriented introduction to Blender environment. Students may continue Database Systems in Practes <td>n bz Algovision (urse credit. Acad entation Paper. Requirements wi ms. Traditional an es (C++, C#, Jav lving. It focuses r , including the er</td> <td>www.algovis demic Achie -Succeed in I be specifie nd novel fun ra). As such mainly on th volutionary a ntended for</td> <td>mputer science sion.org<htt evement - stu both the mice ad by individu Z nctional progr , mastering th e classical ta algorithms ar Z those interes raphics appli</htt </td> <td>ze that exter p://www.algo Z dents are du dterm and th ial teachers Z,ZK KZ amming lan nis paradigm Z,ZK ks from the id the neura Z,ZK sks from the id the neura Z,ZK</td> <td>d substantia pvision.org&g 2 ue to: -Take 1 e final term during the fi 4 5 guages are b becomes a 1 becomes a 1 networks, 1 4 raphics and</td>	n bz Algovision (urse credit. Acad entation Paper. Requirements wi ms. Traditional an es (C++, C#, Jav lving. It focuses r , including the er	www.algovis demic Achie -Succeed in I be specifie nd novel fun ra). As such mainly on th volutionary a ntended for	mputer science sion.org <htt evement - stu both the mice ad by individu Z nctional progr , mastering th e classical ta algorithms ar Z those interes raphics appli</htt 	ze that exter p://www.algo Z dents are du dterm and th ial teachers Z,ZK KZ amming lan nis paradigm Z,ZK ks from the id the neura Z,ZK sks from the id the neura Z,ZK	d substantia pvision.org&g 2 ue to: -Take 1 e final term during the fi 4 5 guages are b becomes a 1 becomes a 1 networks, 1 4 raphics and
The course complem knowledge presented that make understand BI-A2L The content of the co active part in the lang ests with the succes class of the term. BI-APJ This course is preser NI-AFP This course is preser the rise nowadays an necessary competen BIE-ZUM Students are introduc space search, multi-a pe presented as well BI-BLE The course extends F animation. It offers a NI-DSP This course is preser	Algorithms visually ents other algorithm courses at FIT. It brings knowledge about particular important algorithms f d in BI-AG1 and BI-AG2. A wide scope of covered subject is made possible due to using visualization ding the principles of algorithms easy. English language, preparation for the B2 level exam ourse corresponds to the preparation for the English exam at the B2 level. Requirements for cor guage instructionMeet the requirements for writing assignments - Summary, Abstract, Argum ss rate set at 70%80% and over in BOTH tests means ORAL EXAM ONLY (no written part). F Aplication Programming in Java nted in Czech. Advanced technologies in Java. Applied Functional Programming nted in Czech. Functional programming represents one of the traditional programming paradig nce of a software engineer: the theory and especially the practice. Artificial Intelligence Fundamentals ced to the fundamental problems in the Artificial Intelligence, and the basic methods for their so agent systems, game theory, planning, and machine learning. Modern soft-computing methods l. Blender knowledge of opensource program Blender from BI-MGA (Multimedia and Graphics Applicatio complete and practically oriented introduction to Blender environment. Students may continue Database Systems in Practes networks in Practes networks in Czech.	n bz Algovision (urse credit. Acad entation Paper. Requirements wi ms. Traditional an es (C++, C#, Jav lving. It focuses r , including the er	www.algovis demic Achie -Succeed in I be specifie nd novel fun ra). As such mainly on th volutionary a ntended for	mputer science sion.org <htt evement - stu b both the mic ed by individu Z nctional progr , mastering th e classical ta algorithms ar Z those interes raphics appli</htt 	Pre-that exter p://www.algo Z dents are du dents are du term and the tal teachers Z,ZK kZ amming lan nis paradigm z,ZK kg z,ZK z,ZK z,ZK z,ZK z,ZK z,ZK z,ZK zted in 3D g cations) cou z,ZK	d substantia pvision.org&g 2 ue to: -Take - e final term during the fi 4 5 guages are a becomes a 4 e areas of sta I networks, v 4 raphics and rse. 4
The course complem knowledge presented that make understand BI-A2L The content of the co active part in the lang ests with the succes class of the term. BI-APJ This course is preser NI-AFP This course is preser the rise nowadays an necessary competen BIE-ZUM Students are introduc space search, multi-a pe presented as well BI-BLE The course extends F animation. It offers a NI-DSP This course is preser BI-STO	Algorithms visually nents other algorithm courses at FIT. It brings knowledge about particular important algorithms f d in BI-AG1 and BI-AG2. A wide scope of covered subject is made possible due to using visualization and the principles of algorithms easy. English language, preparation for the B2 level exam ourse corresponds to the preparation for the English exam at the B2 level. Requirements for corguage instructionMeet the requirements for writing assignments - Summary, Abstract, Argun ss rate set at 70%80% and over in BOTH tests means ORAL EXAM ONLY (no written part). F Application Programming in Java nted in Czech. Advanced technologies in Java. Applied Functional Programming nucle of a software engineer: the theory and especially the practice. Artificial Intelligence Fundamentals ced to the fundamental problems in the Artificial Intelligence, and the basic methods for their so agent systems, game theory, planning, and machine learning. Modern soft-computing methods I. Blender knowledge of opensource program Blender from BI-MGA (Multimedia and Graphics Applicatio complete and practically oriented introduction to Blender environment. Students may continue Database Systems in Practes nted in Czech.	n bz Algovision (urse credit. Acad lentation Paper. Requirements wi ms. Traditional al es (C++, C#, Jav lving. It focuses r , including the et ns) course. It is i to BI-PGA (Prog	www.algovis	mputer science sion.org <htt evement - stu b both the mice ad by individu Z nctional progr , mastering th ctional progr , mastering th Z e classical ta algorithms ar Z those interes raphics appli Z</htt 	ze that exter p://www.algo Z dents are du dents are du term and the tal teachers Z,ZK KZ amming lan nis paradigm Z,ZK Sks from the add the neura Z,ZK z,ZK Z,ZK Z,ZK Z,ZK Z,ZK Z,ZK	d substantia pvision.org&g 2 ue to: -Take - te final term during the fi 4 5 guages are b becomes a 4 e areas of sta I networks, v 4 raphics and rse. 4 4
The course complem knowledge presented that make understand BI-A2L The content of the co active part in the lang tests with the succes class of the term. BI-APJ This course is preser NI-AFP This course is preser the rise nowadays an necessary competen BIE-ZUM Students are introduc space search, multi-a pe presented as well BI-BLE The course extends by animation. It offers a NI-DSP This course is preser BI-STO The student will learn	Algorithms visually nents other algorithm courses at FIT. It brings knowledge about particular important algorithms f d in BI-AG1 and BI-AG2. A wide scope of covered subject is made possible due to using visualization and the principles of algorithms easy. English language, preparation for the B2 level exam ourse corresponds to the preparation for the English exam at the B2 level. Requirements for corguage instructionMeet the requirements for writing assignments - Summary, Abstract, Argun ss rate set at 70%80% and over in BOTH tests means ORAL EXAM ONLY (no written part). F Aplication Programming in Java nted in Czech. Advanced technologies in Java. Applied Functional Programming nted in Czech. Functional programming represents one of the traditional programming paradig nd the functional programming represents one of the traditionally imperative language ince of a software engineer: the theory and especially the practice. Artificial Intelligence Fundamentals ced to the fundamental problems in the Artificial Intelligence, and the basic methods for their so agent systems, game theory, planning, and machine learning. Modern soft-computing methods in complete and practically oriented introduction to Blender environment. Students may continue Database Systems in Practes nted in Czech. Storage and Filesystems n principles and current solutions of storage systems architecture. The module explains principla	n bz Algovision (urse credit. Acad lentation Paper. Requirements wi ms. Traditional al es (C++, C#, Jav lving. It focuses r , including the et ns) course. It is i to BI-PGA (Prog	www.algovis	mputer science sion.org <htt evement - stu b both the mice ad by individu Z nctional progr , mastering th ctional progr , mastering th Z e classical ta algorithms ar Z those interes raphics appli</htt 	ze that exter p://www.algo Z dents are du dents are du term and the tal teachers Z,ZK KZ amming lan nis paradigm Z,ZK Sks from the add the neura Z,ZK z,ZK Z,ZK Z,ZK Z,ZK Z,ZK Z,ZK	d substantia pvision.org&g 2 ue to: -Take - te final term during the fi 4 5 guages are b becomes a 4 e areas of sta I networks, v 4 raphics and rse. 4 4
The course complem knowledge presented that make understand BI-A2L The content of the co active part in the lang tests with the succes class of the term. BI-APJ This course is preser NI-AFP This course is preser the rise nowadays an necessary competen BIE-ZUM Students are introduc space search, multi-a be presented as well BI-BLE The course extends b animation. It offers a NI-DSP This course is preser BI-STO The student will learn oad balancing and h	Algorithms visually nents other algorithm courses at FIT. It brings knowledge about particular important algorithms f d in BI-AG1 and BI-AG2. A wide scope of covered subject is made possible due to using visualization ding the principles of algorithms easy. English language, preparation for the B2 level exam ourse corresponds to the preparation for the English exam at the B2 level. Requirements for correguage instructionMeet the requirements for writing assignments - Summary, Abstract, Argun as rate set at 70%80% and over in BOTH tests means ORAL EXAM ONLY (no written part). F Aplication Programming in Java nted in Czech. Advanced technologies in Java. Applied Functional Programming In Czech. Functional programming represents one of the traditional programming paradig net of a software engineer: the theory and especially the practice. Artificial Intelligence Fundamentals ced to the fundamental problems in the Artificial Intelligence, and the basic methods for their so agent systems, game theory, planning, and machine learning. Modern soft-computing methods for their so agent systems, game theory, planning, and machine learning. Modern soft-computing methods for their so agent systems and practically oriented introduction to Blender environment. Students may continue Database Systems in Practes Intel in Czech. Storage and Filesystems n principles and current solutions of storage systems architecture. The module explains principling availability. <td>n bz Algovision (urse credit. Acad lentation Paper. Requirements wi ms. Traditional al es (C++, C#, Jav lving. It focuses r , including the et ns) course. It is i to BI-PGA (Prog</td> <td>www.algovis</td> <td>mputer science sion.org<htt evement - stu b both the mice ad by individu Z nctional progr , mastering th ctional progr , mastering th Z e classical ta algorithms ar Z those interes raphics appli Z and archiving</htt </td> <td>Pre-that exter p://www.algo Z dents are du dents are du determ and the rail teachers Z,ZK KZ amming lan nis paradigm Z,ZK sks from the adtions) cou Z,ZK gations) cou Z,ZK Gations) cou Z,ZK Gations) cou Z,ZK Gations) cou Z,ZK</td> <td>d substantia pvision.org&g 2 ue to: -Take a e final term during the fi 4 5 guages are a becomes a 4 e areas of sta l networks, v 4 raphics and rse. 4 torage scalir</td>	n bz Algovision (urse credit. Acad lentation Paper. Requirements wi ms. Traditional al es (C++, C#, Jav lving. It focuses r , including the et ns) course. It is i to BI-PGA (Prog	www.algovis	mputer science sion.org <htt evement - stu b both the mice ad by individu Z nctional progr , mastering th ctional progr , mastering th Z e classical ta algorithms ar Z those interes raphics appli Z and archiving</htt 	Pre-that exter p://www.algo Z dents are du dents are du determ and the rail teachers Z,ZK KZ amming lan nis paradigm Z,ZK sks from the adtions) cou Z,ZK gations) cou Z,ZK Gations) cou Z,ZK Gations) cou Z,ZK Gations) cou Z,ZK	d substantia pvision.org&g 2 ue to: -Take a e final term during the fi 4 5 guages are a becomes a 4 e areas of sta l networks, v 4 raphics and rse. 4 torage scalir
The course complem knowledge presented that make understand BI-A2L The content of the co active part in the lang tests with the succes class of the term. BI-APJ This course is preser NI-AFP This course is preser the rise nowadays an necessary competen BIE-ZUM Students are introduc space search, multi-a be presented as well BI-BLE The course extends be animation. It offers a NI-DSP This course is preser BI-STO The student will learn oad balancing and h NI-PSD	Algorithms visually nents other algorithm courses at FIT. It brings knowledge about particular important algorithms f d in BI-AG1 and BI-AG2. A wide scope of covered subject is made possible due to using visualization ding the principles of algorithms easy. English language, preparation for the B2 level exam ourse corresponds to the preparation for the English exam at the B2 level. Requirements for correguage instructionMeet the requirements for writing assignments - Summary, Abstract, Argun as rate set at 70%80% and over in BOTH tests means ORAL EXAM ONLY (no written part). F Aplication Programming in Java nted in Czech. Advanced technologies in Java. Applied Functional Programming In Czech. Functional programming represents one of the traditional programming paradig nd the functional paradigm becomes an important construct of traditionally imperative language nee of a software engineer: the theory and especially the practice. Artificial Intelligence Fundamentals ced to the fundamental problems in the Artificial Intelligence, and the basic methods for their so agent systems, game theory, planning, and machine learning. Modern soft-computing methods in complete and practically oriented introduction to Blender environment. Students may continue Database Systems in Practes Storage and Filesystems n principles and current solutions of storage systems architecture. The module explains principlingh availability.	n bz Algovision (urse credit. Acad eentation Paper. Requirements wil ms. Traditional au es (C++, C#, Jav lving. It focuses r , including the er ns) course. It is i to BI-PGA (Prog es of data store,	www.algovis	mputer science sion.org <htt evement - stu b both the mice ad by individu Z nctional progr , mastering th ctional progr , mastering th Z e classical ta algorithms ar Z those interes raphics appli Z and archiving</htt 	The end extern p://www.algo Z dents are du dents are du dents are du determ and the al teachers Z,ZK KZ amming lan nis paradign Z,ZK Sted in 3D g cations) cou Z,ZK Gations) cou Z,ZK Gations Z,ZK Z,ZK Z,ZK Z,ZK Z,ZK Z,ZK Z,ZK	d substantia pvision.org&g 2 ue to: -Take 4 e final term during the fi 4 5 guages are b becomes a 4 e areas of sta 1 networks, v 4 raphics and rse. 4 torage scalin 4
The course complem knowledge presented that make understand BI-A2L The content of the co active part in the lang tests with the succes class of the term. BI-APJ This course is preser NI-AFP This course is preser the rise nowadays an necessary competen BIE-ZUM Students are introduc space search, multi-a be presented as well BI-BLE The course extends by animation. It offers a NI-DSP This course is preser BI-STO The student will learn oad balancing and h NI-PSD The course will introd	Algorithms visually nents other algorithm courses at FIT. It brings knowledge about particular important algorithms f d in BI-AG1 and BI-AG2. A wide scope of covered subject is made possible due to using visualization ding the principles of algorithms easy. English language, preparation for the B2 level exam ourse corresponds to the preparation for the English exam at the B2 level. Requirements for cc guage instructionMeet the requirements for writing assignments - Summary, Abstract, Argun ss rate set at 70%80% and over in BOTH tests means ORAL EXAM ONLY (no written part). F Application Programming in Java nted in Czech. Advanced technologies in Java. Applied Functional Programming nted in Czech. Functional programming represents one of the traditional programming paradig net of a software engineer: the theory and especially the practice. Artificial Intelligence Fundamentals ced to the fundamental problems in the Artificial Intelligence, and the basic methods for their so agent systems, game theory, planning, and machine learning. Modern soft-computing methods l. Blender knowledge of opensource program Blender from Bl-MGA (Multimedia and Graphics Applicatio complete and practically oriented introduction to Blender environment. Students may continue complete and practically oriented introduction to Blender environment. Students may continue in Czech. Variabase Systems in Practes Image and Filesystems	n bz Algovision (urse credit. Acad eentation Paper. Requirements wil ms. Traditional an es (C++, C#, Jav lving. It focuses r , including the er ns) course. It is i to BI-PGA (Prog es of data store, k into the desigr	www.algovis	mputer science sion.org <htt evement - stu b both the mice ad by individu Z nctional progr , mastering th ctional progr , mastering th Z e classical ta algorithms ar Z those interes raphics applii Z and archiving popment proce</htt 	The that exter p://www.algo Z dents are du dents are du determ and the tal teachers Z,ZK KZ amming lan nis paradigm Z,ZK Sted in 3D g cations) cou Z,ZK g, as so as s KZ g, as from the	d substantia pvision.org& 2 le to: -Take le final term during the f 4 5 guages are b becomes a 4 e areas of st l networks, ' 4 raphics and rse. 4 torage scali 4 perspective
The course complem knowledge presented that make understand BI-A2L The content of the co active part in the lang tests with the succes class of the term. BI-APJ This course is preser NI-AFP This course is preser the rise nowadays an necessary competen BIE-ZUM Students are introduc space search, multi-a be presented as well BI-BLE The course extends b animation. It offers a NI-DSP This course is preser BI-STO The student will learn oad balancing and h NI-PSD The course will introc	Algorithms visually nents other algorithm courses at FIT. It brings knowledge about particular important algorithms f d in BI-AG1 and BI-AG2. A wide scope of covered subject is made possible due to using visualization ding the principles of algorithms easy. English language, preparation for the B2 level exam ourse corresponds to the preparation for the English exam at the B2 level. Requirements for corguage instructionMeet the requirements for writing assignments - Summary, Abstract, Argun ss rate set at 70%80% and over in BOTH tests means ORAL EXAM ONLY (no written part). F Aplication Programming in Java nted in Czech. Advanced technologies in Java. Applied Functional Programming represents one of the traditional programming paradig net of a software engineer: the theory and especially the practice. Artificial Intelligence Fundamentals ced to the fundamental problems in the Artificial Intelligence, and the basic methods for their so agent systems, game theory, planning, and machine learning. Modern soft-computing methods i. Blender knowledge of opensource program Blender from BI-MGA (Multimedia and Graphics Applicatio complete and practically oriented introduction to Blender environment. Students may continue principles and current solutions of storage systems architecture. The module explains principling availability. Public Services Design duce students to specifics of UX, Service design and development for public sector. We will loc designesr) as well as clients. In small teams students will work on proj	n bz Algovision (urse credit. Acad eentation Paper. Requirements wil ms. Traditional an es (C++, C#, Jav lving. It focuses r , including the er ns) course. It is i to BI-PGA (Prog es of data store, k into the desigr	www.algovis	mputer science sion.org <htt evement - stu b both the mice ad by individu Z nctional progr , mastering th ctional progr , mastering th Z e classical ta algorithms ar Z those interes raphics applii Z and archiving popment proce</htt 	The that exter p://www.algo Z dents are du dents are du determ and the tal teachers Z,ZK KZ amming lan nis paradigm Z,ZK Sted in 3D g cations) cou Z,ZK g, as so as s KZ g, as from the	d substantia pvision.org&g 2 ue to: -Take 4 e final term during the fi 4 5 guages are b becomes a 4 e areas of sta 1 networks, v 4 raphics and rse. 4 torage scalin 4 perspective
The course complem knowledge presented that make understand BI-A2L The content of the co active part in the lang tests with the succes class of the term. BI-APJ This course is preser NI-AFP This course is preser the rise nowadays an necessary competen BIE-ZUM Students are introduc space search, multi-a be presented as well BI-BLE The course extends b animation. It offers a NI-DSP This course is preser BI-STO The student will learn oad balancing and h NI-PSD The course will introc suppliers (devs and c Course is aimed at si	Algorithms visually nents other algorithm courses at FIT. It brings knowledge about particular important algorithms fd in BI-AG1 and BI-AG2. A wide scope of covered subject is made possible due to using visualization ding the principles of algorithms easy. English language, preparation for the B2 level exam ourse corresponds to the preparation for the English exam at the B2 level. Requirements for cc guage instructionMeet the requirements for writing assignments - Summary, Abstract, Argunts are set at 70%80% and over in BOTH tests means ORAL EXAM ONLY (no written part). Fd Aplication Programming in Java Inted in Czech. Advanced technologies in Java. Applied Functional Programming Int czech. Functional programming represents one of the traditional programming paradig ndt functional paradigm becomes an important construct of traditionally imperative language ed to the functional programming, and machine learning. Modern soft-computing methods for their so agent systems, game theory, planning, and machine learning. Modern soft-computing methods l. Blender knowledge of opensource program Blender from Bl-MGA (Multimedia and Graphics Applicatio complete and practically oriented introduction to Blender environment. Students may continue Database Systems in Practes net in Czech. Vibia valiability. Public Services Design duce students to specifics of UX, Service design and development for public sector. We will loc designery) as well as clients.	n bz Algovision (urse credit. Acad eentation Paper. Requirements wil ms. Traditional an es (C++, C#, Jav lving. It focuses r , including the er ns) course. It is i to BI-PGA (Prog es of data store, k into the desigr	www.algovis	mputer science sion.org <htt evement - stu both the mice ad by individu Z nctional progr , mastering th ctional progr , mastering th Z e classical ta algorithms ar Z those interest raphics applii Z and archiving popment procet boration with</htt 	Pre-that exter p://www.algo Z dents are du dents are du term and the tal teachers Z,ZK KZ amming lan nis paradigm Z,ZK Sted in 3D g cations) cou Z,ZK g, as so as s KZ uss from the cations) cou S,ZK g, as so as s KZ uss from the client represent	d substantia pvision.org&g 2 le to: -Take 4 le final term during the fi 4 5 guages are b becomes a 4 e areas of sta 1 networks, v 4 raphics and rse. 4 d torage scalin 4 perspective sentatives.
The course complem knowledge presented that make understand BI-A2L The content of the co active part in the lang tests with the succes class of the term. BI-APJ This course is preser NI-AFP This course is preser the rise nowadays an necessary competen BIE-ZUM Students are introduc space search, multi-a be presented as well BI-BLE The course extends be animation. It offers a NI-DSP This course is preser BI-STO The student will learn oad balancing and h NI-PSD The course will introc suppliers (devs and c Course is aimed at st BIE-DIF	Algorithms visually nents other algorithm courses at FIT. It brings knowledge about particular important algorithms f d in BI-AG1 and BI-AG2. A wide scope of covered subject is made possible due to using visualization ding the principles of algorithms easy. English language, preparation for the B2 level exam ourse corresponds to the preparation for the English exam at the B2 level. Requirements for cor guage instructionMeet the requirements for writing assignments - Summary, Abstract, Argum state set at 70%80% and over in BOTH tests means ORAL EXAM ONLY (no written part). F Aplication Programming in Java nted in Czech. Advanced technologies in Java. Applied Functional Programming nt czech. Functional programming represents one of the traditional programming paradig nd the functional paradigm becomes an important construct of traditionally imperative language need to the fundamental problems in the Artificial Intelligence, and the basic methods for their so agent systems, game theory, planning, and machine learning. Modern soft-computing methods I Blender knowledge of opensource program Blender from Bl-MGA (Multimedia and Graphics Applicatio complete and practically oriented introduction to Blender environment. Students may continue Database Systems in Practes n principles and current solutions of storage systems architecture. The module expl	n bz Algovision (urse credit. Acad eentation Paper. Requirements wil ms. Traditional au es (C++, C#, Jav lving. It focuses r , including the er ns) course. It is i to BI-PGA (Prog es of data store, k into the desigr zations and will t	www.algovis	mputer science sion.org <htt evement - stu both the mice ad by individu 2 ctional progra mastering th ctional progra mastering th 2 cthose interest raphics applie 2 cthose interest raphics applie 2 cthose interest caphics applie 2 cthose interest caphics applie 2 cthose interest caphics applie 2 cthose interest caphics applie 2 cand archiving copment procest boration with 2 cand archiving copment procest coration with</htt 	The that exter p://www.algo Z dents are du dents are du determ and the hal teachers Z,ZK amming lan nis paradigm Z,ZK asks from the actions) cout Z,ZK J, as so as s KZ J, as so as s KZ J, as so as s KZ J, as so as s	d substantia pvision.org& 2 le to: -Take le final term during the f 4 5 guages are becomes a 4 e areas of st l networks, ' 4 raphics and rse. 4 torage scali 9 erspective sentatives. 5
The course complem knowledge presented that make understand BI-A2L The content of the co active part in the lang tests with the succes class of the term. BI-APJ This course is preser NI-AFP This course is preser he rise nowadays an necessary competen BIE-ZUM Students are introduc space search, multi-a be presented as well BI-BLE The course extends b animation. It offers a NI-DSP This course is preser BI-STO The student will learn oad balancing and h NI-PSD The course will introd suppliers (devs and c Course is aimed at si BIE-DIF This course provides	Algorithms visually nents other algorithm courses at FIT. It brings knowledge about particular important algorithms fd in BI-AG1 and BI-AG2. A wide scope of covered subject is made possible due to using visualization ding the principles of algorithms easy. English language, preparation for the B2 level exam ourse corresponds to the preparation for the English exam at the B2 level. Requirements for cc guage instructionMeet the requirements for writing assignments - Summary, Abstract, Argunts are set at 70%80% and over in BOTH tests means ORAL EXAM ONLY (no written part). Fd Aplication Programming in Java Inted in Czech. Advanced technologies in Java. Applied Functional Programming Int czech. Functional programming represents one of the traditional programming paradig ndt functional paradigm becomes an important construct of traditionally imperative language ed to the functional programming, and machine learning. Modern soft-computing methods for their so agent systems, game theory, planning, and machine learning. Modern soft-computing methods l. Blender knowledge of opensource program Blender from Bl-MGA (Multimedia and Graphics Applicatio complete and practically oriented introduction to Blender environment. Students may continue Database Systems in Practes net in Czech. Vibia valiability. Public Services Design duce students to specifics of UX, Service design and development for public sector. We will loc designery) as well as clients.	n bz Algovision (urse credit. Acad eentation Paper. Requirements wil as (C++, C#, Jav king. It focuses r , including the e ns) course. It is i to BI-PGA (Prog es of data store, k into the desigr zations and will t	www.algovis	mputer science sion.org <htt evement - stu both the mice ad by individu 2 conctional progra mastering th concerning th concerning th concerning th concerning th concerning th concerning the concerning the concernin</htt 	The end extern p://www.algo Z dents are du dents are du dents are du dents are du derm and the al teachers Z,ZK amming lan nis paradign Z,ZK Sted in 3D g cations) cou Z,ZK g, as so as s KZ uss from the client represent Z,ZK uss from the client represent Z,ZK	d substantia pvision.org& 2 le to: -Take le final term during the f 4 5 guages are b becomes a 4 e areas of st l networks, 4 raphics and rse. 4 torage scali 4 perspective sentatives. 5 like separat
The course complem knowledge presented that make understand BI-A2L The content of the co active part in the lang tests with the succes class of the term. BI-APJ This course is preser NI-AFP This course is preser the rise nowadays an necessary competen BIE-ZUM Students are introduc space search, multi-a pe presented as well BI-BLE The course extends b animation. It offers a NI-DSP This course is preser BI-STO The student will learn oad balancing and h NI-PSD The course will introd suppliers (devs and co course is aimed at st BIE-DIF This course provides of variables. Key theo	Algorithms visually nents other algorithm courses at FIT. It brings knowledge about particular important algorithms f in BI-AG1 and BI-AG2. A wide scope of covered subject is made possible due to using visualizatic iding the principles of algorithms easy. English language, preparation for the B2 level exam pourse corresponds to the preparation for the English exam at the B2 level. Requirements for cc guage instructionMeet the requirements for writing assignments - Summary, Abstract, Argun ss rate set at 70%80% and over in BOTH tests means ORAL EXAM ONLY (no written part). F Aplication Programming in Java inted in Czech. Advanced technologies in Java. Applied Functional programming represents one of the traditional programming paradig nee of a software engineer: the theory and especially the practice. Artificial Intelligence Fundamentals ced to the fundamental problems in the Artificial Intelligence, and the basic methods for their so agent systems, game theory, planning, and machine learning. Modern soft-computing methods i. Blender knowledge of opensource program Blender from Bl-MGA (Multimedia and Graphics Applicatio complete and practically oriented introduction to Blender environment. Students may continue IDatabase Systems in Practes ne fine Czech. Norige and Filesystems <t< td=""><td>n bz Algovision (urse credit. Acad eentation Paper. Requirements wil ms. Traditional an es (C++, C#, Jav lving. It focuses r , including the et ns) course. It is i to BI-PGA (Prog es of data store, k into the desigr zations and will t ODEs and progr</td><td>www.algovis</td><td>mputer science sion.org<htt evement - stu b both the mice ad by individu Z inctional progr , mastering th cational progr , mastering th Z e classical ta algorithms ar Z those interes raphics applie Z and archiving opment proce boration with Z sential solutii ered with me</htt </td><td>The that exter p://www.algo Z dents are du dents are du term and the tal teachers Z,ZK KZ amming lan nis paradigm Z,ZK gations) cou Z,ZK gations are account of the client represent of the client represent of the client state client state</td><td>d substantii pvision.org& 2 ue to: -Take le final term during the f 4 5 guages are b becomes 4 e areas of st I networks, 4 raphics and rse. 4 torage scali 4 perspective sentatives. 5 like separat</td></t<>	n bz Algovision (urse credit. Acad eentation Paper. Requirements wil ms. Traditional an es (C++, C#, Jav lving. It focuses r , including the et ns) course. It is i to BI-PGA (Prog es of data store, k into the desigr zations and will t ODEs and progr	www.algovis	mputer science sion.org <htt evement - stu b both the mice ad by individu Z inctional progr , mastering th cational progr , mastering th Z e classical ta algorithms ar Z those interes raphics applie Z and archiving opment proce boration with Z sential solutii ered with me</htt 	The that exter p://www.algo Z dents are du dents are du term and the tal teachers Z,ZK KZ amming lan nis paradigm Z,ZK gations) cou Z,ZK gations are account of the client represent of the client represent of the client state	d substantii pvision.org& 2 ue to: -Take le final term during the f 4 5 guages are b becomes 4 e areas of st I networks, 4 raphics and rse. 4 torage scali 4 perspective sentatives. 5 like separat

NI-DZO	Digital Image Processing	Z,ZK	4
	comprehensive overview of modern methods for interactive editing of digital images and video. It mainly deals with practical	-	-
	interesting theoretical basis. Visually attractive applications provide better understanding of basic theoretical background that i		
	ing. This course will introduce algorithms solving the following practical applications: edge-aware editing, tone mapping, HDF raction, hybrid images, gradient domain editing, seamless image stitching and cloning, digital photo-montage, color-to-gray c	-	-
	ossible image deformation, free-form image registration, texture synthesis, interactive segmentation, colorization, painting, a		
NI-DDM	Distributed Data Mining	KZ	4
Course focuses on state	e-of-the-art approaches for distributed data mining and parallelization of machine learning algorithms. Students will gain hand	ds on experience	with large scale
	ork Apache Spark and with existing distributed DM / ML algorithms. They will learn principles of their parallel implementation	is and will be capa	ble to propose
	e other algorithms. The course is prezented in czech language.	1/7	
BI-EP1.24 The course is taught in	Effective programming 1 Czech.	KZ	4
BI-EP2	Efficient Programming 2	KZ	4
Continuation of Efficient	Programming 1. Students will practice implementation of algorithms by solving typical problems. Various ways of solving ind	ividual problems a	are discussed,
	he best one and avoid implementation errors.		
BI-ANGK	English language, contact preparation for the B2 level exam	Z	2 dua tau Taka an
	se corresponds to the preparation for the English exam at the B2 level. Requirements for course credit. Academic Achievements for course credit. Academic Achievements for instructionMeet the requirements for writing assignments - Summary, Abstract, Argumentation PaperSucceed in both		
	ate set at 70%80% and over in BOTH tests means ORAL EXAM ONLY (no written part). Requirements will be specified by		
class of the term.			J
BI-EJA	Enterprise Java	Z,ZK	4
	ced technologies in the Java programming language. The focus is on technologies for development of enterprise information	systems which ar	e connected to
	essed through the web interface.		
BI-EJK	Enterprise Java and Kotlin	Z,ZK	4
architecture, that can be	ced technologies in the Java and Kotlin programming languages. The focus is on technologies for developing enterprise infor	mation systems w	ith microservice
BI-FMU	Financial and Management Accounting	Z,ZK	5
	s explanation of basic terms in the theory of accounting, the principles of balancing the property amounts and liabilities in the		-
	and accounting statements including opening and closing of bookkeeping. The course provides students with a legal modification of the student st	•	
of economic operations	based on current methods of double-entry bookkeeping for enterprising subjects in the Czech Republic. Principles of manage	ement accounting	are base of
	oduls in Business information systems.		
BI-HAM	HW accelerated network traffic monitoring	KZ	4
	students to modern and widely used technologies and principles in the area of network infrastructure and traffic monitoring. T	-	-
	latory skills to network operators (planning and development of resources and infrastructure) and security analysts alike (as of the course are to acquaint students with the modern trends and cornerstone principles in the area of monitoring network t		
	ir practical abilities in this field.		
BI-HMI	History of Mathematics and Informatics	Z,ZK	3
This course is presente			
BI-ARD	Interactive applications on Arduino	KZ	4
	for students of first grade of bachelor study as introduction to embedded systems. Students will learn how to design simple appl		
	eripherals with help of available libraries. The goal of the subject is to show varied software approaches to control embedded	,	
Software Engineering s	PC. Thanks to possible control on higher (objective) layer, this platform is frequently used for artist performance and therefor tudents.	e is suitable even	
NI-IAM	Internet and Multimedia	Z,ZK	4
	cused on principles and modern technologies for network transmissions of audiovisual (AV) signals. The syllabus includes a	· · ·	
presentation of AV signa	als (output), network communication protocols, device interfaces, codecs, data formats and stereoscopy. We will look at practic	al use case scena	arios of real-time
audiovisual transmissio	ns. Within the labs, students will practically assemble AV transmission chains using HW and SW technologies and verify the	effect of various c	omponents on
	of AV transmissions. Students will learn how to build Internet infrastructure for end-to-end AV transmissions from the recording	g the scene up to	the presentation
for audience.	Introduction to Computer Science		<u> </u>
BIE-CSI	Introduction to Computer Science lass on Elementary Computer Science for broad audiences: bachelor students in computer science, students majoring in other	Z Pr fields but interes	2 sted in computer
	idents, anybody with a background in basic math and the desire to understand the absolute basics of computer science. The		
, 0	es of computer science for students to understand, early on, what computer science is, why things such as high-level progra	0	
done the way they are,	and even how, on a basic yet representative and practically relevant level. After taking the class, students are able to answer	not just basic con	puter science
	tions about themselves such as which courses to take next and which books to follow up with, ideally realizing if they are interested as the second	erested in compute	er science more
than expected, or even			
FITE-EHD	Introduction to European Economic History	Z,ZK	3
	a selection of themes from the European economic history. It gives the student basic knowledge about forming of the global e tory. As European countries have been dominant actors in this process it focuses predominantly on their roles in the econom		-
	to fragmentation of the Middle Ages, from destruction of WWII to the current affairs, the development of modern financial inst	-	-
does not cover detailed			history Class
montingo will consist of	economic history of particular European countries but rather the impact of trade and role of particular events, institutions and	-	nistory. Class
-	economic history of particular European countries but rather the impact of trade and role of particular events, institutions and a mixture of lecture and discussion.	d organizations in	
BIE-IMA2	economic history of particular European countries but rather the impact of trade and role of particular events, institutions and a mixture of lecture and discussion. Introduction to Mathematics 2	d organizations in	2
BIE-IMA2 Students refresh and ex	economic history of particular European countries but rather the impact of trade and role of particular events, institutions and a mixture of lecture and discussion.	d organizations in	2
BIE-IMA2 Students refresh and examples.	economic history of particular European countries but rather the impact of trade and role of particular events, institutions and a mixture of lecture and discussion. Introduction to Mathematics 2 tend knowledge of elementary functions and their properties. Students understand basic mathematical principles and they a	d organizations in Z re able to apply th	2 em in particular
BIE-IMA2 Students refresh and exemples. BI-CS2	economic history of particular European countries but rather the impact of trade and role of particular events, institutions and a mixture of lecture and discussion. Introduction to Mathematics 2 tend knowledge of elementary functions and their properties. Students understand basic mathematical principles and they a C# language and data access	d organizations in Z re able to apply th KZ	2 em in particular 4
BIE-IMA2 Students refresh and exemples. BI-CS2 The C# language and d	economic history of particular European countries but rather the impact of trade and role of particular events, institutions and a mixture of lecture and discussion. Introduction to Mathematics 2 tend knowledge of elementary functions and their properties. Students understand basic mathematical principles and they a	d organizations in Z re able to apply th KZ rosoft platform. Th	2 em in particular 4 e students will
BIE-IMA2 Students refresh and exeramples. BI-CS2 The C# language and d get to know objects use	economic history of particular European countries but rather the impact of trade and role of particular events, institutions and a mixture of lecture and discussion. Introduction to Mathematics 2 tend knowledge of elementary functions and their properties. Students understand basic mathematical principles and they a C# language and data access ata access course objective is to introduce students several data access technologies - database, XML, NoSQL - on the Mic	d organizations in Z re able to apply th KZ rosoft platform. Th chnologies such a	2 em in particular 4 e students will s LINQ - a set
BIE-IMA2 Students refresh and exexamples. BI-CS2 The C# language and d get to know objects use of features for querying	economic history of particular European countries but rather the impact of trade and role of particular events, institutions and a mixture of lecture and discussion. Introduction to Mathematics 2 tend knowledge of elementary functions and their properties. Students understand basic mathematical principles and they a C# language and data access ata access course objective is to introduce students several data access technologies - database, XML, NoSQL - on the Mic d to retrieve data - Connection, Command, Data Reader and DataAdapter v ADO.NET. Next, they will learn to use current te	d organizations in Z re able to apply th KZ rosoft platform. Th chnologies such a _ (LINQ to Objects	2 em in particular 4 e students will s LINQ - a set s, LINQ to XML
BIE-IMA2 Students refresh and exexamples. BI-CS2 The C# language and d get to know objects use of features for querying and LINQ to SQL). Anot	economic history of particular European countries but rather the impact of trade and role of particular events, institutions and a mixture of lecture and discussion. Introduction to Mathematics 2 tend knowledge of elementary functions and their properties. Students understand basic mathematical principles and they a C# language and data access ata access course objective is to introduce students several data access technologies - database, XML, NoSQL - on the Mic d to retrieve data - Connection, Command, Data Reader and DataAdapter v ADO.NET. Next, they will learn to use current te and updating data, integrated directly with the .NET platform languages, which enable LINQ use with Objects, XML and SQL	d organizations in Z re able to apply th KZ rosoft platform. Th chnologies such a _ (LINQ to Objects a using domain-sp	2 em in particular 4 e students will s LINQ - a set t, LINQ to XML ecific objects

BI-CS3 The students will be intro	Language C# - design of web applications oduced to current technologies in web application development on the .NET platform. They will acquire a comprehensive overvious	KZ ew of the developm	4 nent possibilities
on thisplatform. They wi	I learn to create WebAPI and to use it by client programs.		
BI-SQL.1 Module is based on kno	Language SQL, advanced wledge obtained in BI-DBS. Students become familiar with advanced relational and non-relational features of SQL language. I	KZ	4 program unites,
	es, OLAP support, object-relational constructions. Part of the course is dedicated to practical database optimization from the po	•	
	clusters, index-organized tables, and materialized views. as well as from the point of view query optimization. Execution plan	-	-
PostgreSQL.	res will usually discuss SQL standard, but many features will be demonstrated on Oracle DBMS. Seminars are based on Ora		_
BI-QAP	Quantum algorithms and programming	KZ	5
	udents hands-on experience with quantum computers and their programming. We focus on fundaments of quantum mechanic ns showing advantages and limitations of quantum computing. During tutorials students work in open-source software devel		-
	owledge of linear algebra at the level of BI-LA1 and BI-LA2 (or BI-LIN) is necessary. Previous completion of BI-MA2 or BI-VI	•	
, , ,	No previous knowledge of physics is assumed.		, ,
NI-LSM	Statistical Modelling Lab	KZ	5
	on a single and multi-target tracking. The student both learns the existing methods and tries to implement them. The stress is		
	d its modeling using numpy and scipy. The second half of the semester is focused on the design of methods and algorithms, is on the border of own research and may result in the topic of final work (diploma or bachelor thesis).	and analyses of t	neir properties.
BI-HAS	Human Aspects in Cryptography and Security	Z,ZK	5
	ints interested not only in technical scope of computer science, but also in making products usable - for users and for develop		-
use their gained knowle	dge to design, plan and analyse their own projects in the context of human-centered security.		
NI-MPL	Managerial Psychology	ZK	2
NI-MSI	Mathematical Structures in Computer Science	Z,ZK	4
	s of programming languages. Data types as continous lattices, Scott topology. Procedures as continuous mappings. The Sco	tt model of lambda	a calculus.
Introduction to category BI-MPP.21		7 71/	5
	Methods of interfacing peripheral devices n methods for interfacing of peripheral devices. Interfacing of real peripheral devices is focused on techniques based on Univ	Z,ZK	5 SB) The course
	nd peripheral devices side. Labs are practically oriented. Students gain experience with implementation of relevant parts of U		
drivers, simple applicati	on development, and APIs of selected devices.		
BI-MIT	Mikrotik technologies	KZ	3
	the subject stands in the introduction of the RouterOS operating system and some network Mikrotik technologies which are d		
	providers (ISPs). The students learn how to use and create the architectures of the network solutions which are based on the and practically deploy them. The successful completion of this subject requires the previous knowledge of elementary compute	· ·	
	data-link, network and transport layer of the OSI model.		
NI-MOP	Modern Object-Oriented Programming in Pharo	KZ	4
Object-oriented program	ming is currently one of the most widespread paradigms of software creation, especially enterprise information systems, who	ere its ability to na	tural abstraction
	modern applications. In this course, we build on the knowledge acquired in the course BI-OOP and aim to further deepen the s	-	
	dern pure object system Pharo (https://pharo.org). The course focuses on individual approach to students, their developmen bject programming skills, which are generally applicable in other OO languages, students will also gain the opportunity to wo		
	semestral work with the possibility of cooperation with practice and related bachelor, diploma, postgraduate our direct involv		-
BI-MVT.21	Modern Visualisation Technologies	Z,ZK	5
	s to give an overview of modern visualization technologies and their principles, namely technologies related to virtual and au		
	(e.g., SAGE and video mapping) and their applications in practice. Several lectures deal with the content creation for the ment	ioned technologie	s, namely fractal
BI-MMP	tion, scientific data visualization, and 3D model scanning.		
This course is presente		47	4
BI-ORL	Multimedia team project d in Czech.	KZ	4
-	d in Czech. Operations Research and Linear Programming	KZ	5
	d in Czech. Operations Research and Linear Programming oduce students to the issues of operational research and primarily to the practical application of linear programming as a fun	KZ	5
	d in Czech. Operations Research and Linear Programming oduce students to the issues of operational research and primarily to the practical application of linear programming as a fun imarily focuses on the use of engineering methods (with a mathematical background) to solve practical problems (such as m	KZ damental optimiza nanagement).	5 ation technique.
NI-OLI	d in Czech. Operations Research and Linear Programming oduce students to the issues of operational research and primarily to the practical application of linear programming as a fun	KZ damental optimiza nanagement). Z,ZK	5 ation technique. 4
NI-OLI The Linux operating sys increase the variability of	d in Czech. Operations Research and Linear Programming boduce students to the issues of operational research and primarily to the practical application of linear programming as a fun imarily focuses on the use of engineering methods (with a mathematical background) to solve practical problems (such as m Linux Drivers tem is an important operating system for personal computer and also for embedded systems. Systems on chip and combining of peripheral subsystems requiring specific software drivers. This course is an advanced course in the Linux driver development	KZ damental optimiza nanagement). Z,ZK g powerful process ent for master's str	5 ation technique. 4 sors and FPGAs
NI-OLI The Linux operating sys increase the variability of course provides knowle	d in Czech. Operations Research and Linear Programming boduce students to the issues of operational research and primarily to the practical application of linear programming as a fun imarily focuses on the use of engineering methods (with a mathematical background) to solve practical problems (such as m Linux Drivers tem is an important operating system for personal computer and also for embedded systems. Systems on chip and combining of peripheral subsystems requiring specific software drivers. This course is an advanced course in the Linux driver developmed dge of Linux operating system architecture, principles of development of various types drivers, including practical experience	KZ damental optimiza nanagement). Z,ZK g powerful process ent for master's stro s.	5 ation technique. 4 sors and FPGAs udents. The
NI-OLI The Linux operating sys increase the variability of course provides knowle BI-ACM	d in Czech. Operations Research and Linear Programming boduce students to the issues of operational research and primarily to the practical application of linear programming as a fun imarily focuses on the use of engineering methods (with a mathematical background) to solve practical problems (such as m Linux Drivers tem is an important operating system for personal computer and also for embedded systems. Systems on chip and combining of peripheral subsystems requiring specific software drivers. This course is an advanced course in the Linux driver development dge of Linux operating system architecture, principles of development of various types drivers, including practical experience Programming Practices 1	KZ damental optimiza nanagement). Z,ZK g powerful process ent for master's str	5 ation technique. 4 sors and FPGAs
NI-OLI The Linux operating sys increase the variability of course provides knowle BI-ACM This is a selective course	d in Czech. Operations Research and Linear Programming boduce students to the issues of operational research and primarily to the practical application of linear programming as a fun imarily focuses on the use of engineering methods (with a mathematical background) to solve practical problems (such as m Linux Drivers tem is an important operating system for personal computer and also for embedded systems. Systems on chip and combining of peripheral subsystems requiring specific software drivers. This course is an advanced course in the Linux driver developmed dge of Linux operating system architecture, principles of development of various types drivers, including practical experience Programming Practices 1 e for preparing talented student for representation in international programming contests.	KZ damental optimiza nanagement). Z,ZK g powerful process ent for master's str a. KZ	5 ation technique. 4 sors and FPGAs udents. The 5
NI-OLI The Linux operating sys increase the variability of course provides knowle BI-ACM This is a selective cours FIT-ACM1 This is a selective cours	d in Czech. Operations Research and Linear Programming boduce students to the issues of operational research and primarily to the practical application of linear programming as a fun imarily focuses on the use of engineering methods (with a mathematical background) to solve practical problems (such as m Linux Drivers tem is an important operating system for personal computer and also for embedded systems. Systems on chip and combining of peripheral subsystems requiring specific software drivers. This course is an advanced course in the Linux driver development dge of Linux operating system architecture, principles of development of various types drivers, including practical experience Programming Practices 1	KZ damental optimiza nanagement). Z,ZK g powerful process ent for master's str kz KZ	5 ation technique. 4 sors and FPGAs udents. The 5 5
NI-OLI The Linux operating sys increase the variability of course provides knowle BI-ACM This is a selective cours FIT-ACM1 This is a selective cours FIT-ACM2	d in Czech. Operations Research and Linear Programming oduce students to the issues of operational research and primarily to the practical application of linear programming as a fun imarily focuses on the use of engineering methods (with a mathematical background) to solve practical problems (such as m Linux Drivers tem is an important operating system for personal computer and also for embedded systems. Systems on chip and combining of peripheral subsystems requiring specific software drivers. This course is an advanced course in the Linux driver development dge of Linux operating system architecture, principles of development of various types drivers, including practical experience Programming Practices 1 e for preparing talented student for representation in international programming contests. Programming Practices 2	KZ damental optimiza nanagement). Z,ZK g powerful process ent for master's str a. KZ	5 ation technique. 4 sors and FPGAs udents. The 5
NI-OLI The Linux operating sys increase the variability of course provides knowle BI-ACM This is a selective cours FIT-ACM1 This is a selective cours FIT-ACM2 This is a selective cours	d in Czech. Operations Research and Linear Programming oduce students to the issues of operational research and primarily to the practical application of linear programming as a fun imarily focuses on the use of engineering methods (with a mathematical background) to solve practical problems (such as m Linux Drivers tem is an important operating system for personal computer and also for embedded systems. Systems on chip and combining of peripheral subsystems requiring specific software drivers. This course is an advanced course in the Linux driver development dge of Linux operating system architecture, principles of development of various types drivers, including practical experience Programming Practices 1 e for preparing talented student for representation in international programming contests. Programming Practices 2 e for preparing talented student for representation in international programming contests.	KZ damental optimiza nanagement). Z,ZK g powerful process ent for master's str KZ KZ KZ	5 ation technique. 4 sors and FPGAs udents. The 5 5 5
NI-OLI The Linux operating sys increase the variability of course provides knowled BI-ACM This is a selective cours FIT-ACM1 This is a selective cours FIT-ACM2 This is a selective cours BI-ACM2	d in Czech. Operations Research and Linear Programming oduce students to the issues of operational research and primarily to the practical application of linear programming as a fun imarily focuses on the use of engineering methods (with a mathematical background) to solve practical problems (such as m Linux Drivers tem is an important operating system for personal computer and also for embedded systems. Systems on chip and combining of peripheral subsystems requiring specific software drivers. This course is an advanced course in the Linux driver development dge of Linux operating system architecture, principles of development of various types drivers, including practical experience Programming Practices 1 e for preparing talented student for representation in international programming contests. Programming Practices 2	KZ damental optimiza nanagement). Z,ZK g powerful process ent for master's str kz KZ	5 ation technique. 4 sors and FPGAs udents. The 5 5
NI-OLI The Linux operating sys increase the variability of course provides knowled BI-ACM This is a selective cours FIT-ACM1 This is a selective cours FIT-ACM2 This is a selective cours BI-ACM2	d in Czech. Operations Research and Linear Programming oduce students to the issues of operational research and primarily to the practical application of linear programming as a fun imarily focuses on the use of engineering methods (with a mathematical background) to solve practical problems (such as m Linux Drivers tem is an important operating system for personal computer and also for embedded systems. Systems on chip and combining of peripheral subsystems requiring specific software drivers. This course is an advanced course in the Linux driver development dge of Linux operating system architecture, principles of development of various types drivers, including practical experience Programming Practices 1 e for preparing talented student for representation in international programming contests. Programming Practices 2 e for preparing talented student for representation in international programming contests. Programming Practices 2 e for preparing talented student for representation in international programming contests. Programming Practices 2	KZ damental optimiza nanagement). Z,ZK g powerful process ent for master's str KZ KZ KZ	5 ation technique. 4 sors and FPGAs udents. The 5 5 5
NI-OLI The Linux operating sys increase the variability of course provides knowle BI-ACM This is a selective cours FIT-ACM1 This is a selective cours FIT-ACM2 This is a selective cours BI-ACM2 This is a selective cours FIT-ACM3 This is a selective cours	d in Czech. Operations Research and Linear Programming oduce students to the issues of operational research and primarily to the practical application of linear programming as a fun imarily focuses on the use of engineering methods (with a mathematical background) to solve practical problems (such as m Linux Drivers tem is an important operating system for personal computer and also for embedded systems. Systems on chip and combining of peripheral subsystems requiring specific software drivers. This course is an advanced course in the Linux driver development of ge of Linux operating system architecture, principles of development of various types drivers, including practical experience Programming Practices 1 e for preparing talented student for representation in international programming contests. Programming Practices 2 e for preparing talented student for representation in international programming contests. Programming Practices 3 e for preparing talented student for representation in international programming contests. Programming Practices 3 e for preparing talented student for representation in international programming contests. Programming Practices 3 e for preparing talented student for representation in international programming contests. Programming Practices 3 e for preparing talented student for representation in international programming contests. Programming Practices 3 e for preparing talented student for representation in international programming contests.	KZ damental optimiza aanagement). Z,ZK g powerful process ent for master's str KZ KZ KZ KZ KZ	5 ation technique. 4 sors and FPGAs udents. The 5 5 5 5 5 5 5 5
NI-OLI The Linux operating sys increase the variability of course provides knowle BI-ACM This is a selective cours FIT-ACM1 This is a selective cours FIT-ACM2 This is a selective cours BI-ACM2 This is a selective cours FIT-ACM3 This is a selective cours BI-ACM3	d in Czech. Operations Research and Linear Programming oduce students to the issues of operational research and primarily to the practical application of linear programming as a fun imarily focuses on the use of engineering methods (with a mathematical background) to solve practical problems (such as m Linux Drivers tem is an important operating system for personal computer and also for embedded systems. Systems on chip and combining of peripheral subsystems requiring specific software drivers. This course is an advanced course in the Linux driver development dge of Linux operating system architecture, principles of development of various types drivers, including practical experience Programming Practices 1 e for preparing talented student for representation in international programming contests. Programming Practices 2 e for preparing talented student for representation in international programming contests. Programming Practices 2 e for preparing talented student for representation in international programming contests. Programming Practices 3 Programming Practices 3	KZ damental optimiza aanagement). Z,ZK g powerful process ent for master's str KZ KZ KZ KZ	5 ation technique. 4 sors and FPGAs udents. The 5 5 5 5 5
NI-OLI The Linux operating sys increase the variability of course provides knowle BI-ACM This is a selective cours FIT-ACM1 This is a selective cours FIT-ACM2 This is a selective cours BI-ACM2 This is a selective cours FIT-ACM3 This is a selective cours BI-ACM3	d in Czech. Operations Research and Linear Programming bduce students to the issues of operational research and primarily to the practical application of linear programming as a fun imarily focuses on the use of engineering methods (with a mathematical background) to solve practical problems (such as m Linux Drivers tem is an important operating system for personal computer and also for embedded systems. Systems on chip and combining of peripheral subsystems requiring specific software drivers. This course is an advanced course in the Linux driver development of peripheral subsystems requiring specific software drivers. This course is an advanced course in the Linux driver development of peripheral subsystems requiring specific software drivers. This course is an advanced course, including practical experience Programming Practices 1 e for preparing talented student for representation in international programming contests. Programming Practices 2 e for preparing talented student for representation in international programming contests. Programming Practices 3 e for preparing talented student for representation in international programming contests. Programming Practices 3 e for preparing talented student for representation in international programming contests. Programming Practices 3 e for preparing talented student for representation in international programming contests. Programming Practices 3 e for preparing talented student for representation in international programming contests. Programming Practices 3 e for preparing talented student for representation in international programming contests. Programming Practices 3 e for preparing talented student for representation in international programming contests. Programming Practices 3 e for preparing talented student for representation in international programming contests. Programming Practices 3 e for preparing talented student for representation in international programming contests. Programming Practices 3 e for preparing talented student for re	KZ damental optimiza aanagement). Z,ZK g powerful process ent for master's str KZ KZ KZ KZ KZ	5 ation technique. 4 sors and FPGAs udents. The 5 5 5 5 5 5 5 5
NI-OLI The Linux operating sys increase the variability of course provides knowle BI-ACM This is a selective cours FIT-ACM1 This is a selective cours FIT-ACM2 This is a selective cours BI-ACM2 This is a selective cours FIT-ACM3 This is a selective cours BI-ACM3 This is a selective cours FIT-ACM4	d in Czech. Operations Research and Linear Programming buduce students to the issues of operational research and primarily to the practical application of linear programming as a fun imarily focuses on the use of engineering methods (with a mathematical background) to solve practical problems (such as m Linux Drivers tem is an important operating system for personal computer and also for embedded systems. Systems on chip and combining of peripheral subsystems requiring specific software drivers. This course is an advanced course in the Linux driver developmed dge of Linux operating system architecture, principles of development of various types drivers, including practical experience Programming Practices 1 e for preparing talented student for representation in international programming contests. Programming Practices 2 e for preparing talented student for representation in international programming contests. Programming Practices 3 e for preparing talented student for representation in international programming contests. Programming Practices 3 e for preparing talented student for representation in international programming contests. Programming Practices 3 e for preparing talented student for representation in international programming contests. Programming Practices 3 e for preparing talented student for representation in international programming contests. Programming Practices 3 e for preparing talented student for representation in international programming contests. Programming Practices 3 e for preparing talented student for representation in international programming contests. Programming Practices 3 e for preparing talented student for representation in international programming contests. Programming Practices 3 e for preparing talented student for representation in international programming contests. Programming Practices 3 e for preparing talented student for representation in international programming contests.	KZ damental optimiza aanagement). Z,ZK g powerful process ent for master's str KZ KZ KZ KZ KZ KZ	5 ation technique. 4 sors and FPGAs udents. The 5 5 5 5 5 5 5 5 5 5
NI-OLI The Linux operating sys increase the variability of course provides knowled BI-ACM This is a selective cours FIT-ACM1 This is a selective cours FIT-ACM2 This is a selective cours BI-ACM2 This is a selective cours FIT-ACM3 This is a selective cours BI-ACM3 This is a selective cours FIT-ACM4 This is a selective cours FIT-ACM4	d in Czech. Operations Research and Linear Programming bduce students to the issues of operational research and primarily to the practical application of linear programming as a fun imarily focuses on the use of engineering methods (with a mathematical background) to solve practical problems (such as m Linux Drivers tem is an important operating system for personal computer and also for embedded systems. Systems on chip and combining if peripheral subsystems requiring specific software drivers. This course is an advanced course in the Linux driver developmed dg of Linux operating system architecture, principles of development of various types drivers, including practical experience Programming Practices 1 e for preparing talented student for representation in international programming contests. Programming Practices 2 e for preparing talented student for representation in international programming contests. Programming Practices 3 e for preparing talented student for representation in international programming contests. Programming Practices 3 e for preparing talented student for representation in international programming contests. Programming Practices 3 e for preparing talented student for representation in international programming contests. Programming Practices 3 e for preparing talented student for representation in international programming contests. Programming Practices 4 e for preparing talented student for representation in international programming contests. Programming Practices 4 e for preparing talented student for representation in international programming contests. Programming Practices 4 e for preparing talented student for representation in international programming contests. Programming Practices 4 e for preparing talented student for representation in international programming contests. Programming Practices 4 e for preparing talented student for representation in international programming contests. Programming Practices 4 e for preparing talented student for representation in internatio	KZ damental optimiza aanagement). Z,ZK g powerful process ent for master's str KZ KZ KZ KZ KZ KZ	5 ation technique. 4 sors and FPGAs udents. The 5 5 5 5 5 5 5 5 5 5
NI-OLI The Linux operating sys increase the variability of course provides knowled BI-ACM This is a selective cours FIT-ACM1 This is a selective cours FIT-ACM2 This is a selective cours BI-ACM2 This is a selective cours FIT-ACM3 This is a selective cours BI-ACM3 This is a selective cours FIT-ACM4 This is a selective cours FIT-ACM4	d in Czech. Operations Research and Linear Programming boduce students to the issues of operational research and primarily to the practical application of linear programming as a fun imarily focuses on the use of engineering methods (with a mathematical background) to solve practical problems (such as m Linux Drivers tem is an important operating system for personal computer and also for embedded systems. Systems on chip and combining of peripheral subsystems requiring specific software drivers. This course is an advanced course in the Linux driver development of development of various types drivers, including practical experience Programming Practices 1 e for preparing talented student for representation in international programming contests. Programming Practices 2 e for preparing talented student for representation in international programming contests. Programming Practices 3 e for preparing talented student for representation in international programming contests. Programming Practices 3 e for preparing talented student for representation in international programming contests. Programming Practices 3 e for preparing talented student for representation in international programming contests. Programming Practices 3 e for preparing talented student for representation in international programming contests. Programming Practices 3 e for preparing talented student for representation in international programming contests. Programming Practices 3 e for preparing talented student for representation in international programming contests. Programming Practices 4 e for preparing talented student for representation in international programming contests. Programming Practices 4 e for preparing talented student for representation in international programming contests. Programming Practices 4 e for preparing talented student for representation in international programming contests.	KZ damental optimiza anagement). Z,ZK g powerful process ent for master's str KZ KZ KZ KZ KZ KZ	5 ation technique. 4 sors and FPGAs udents. The 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5

FIT-ACM6 Programming Practices 6 This is a selective course for preparing talented student for representation in international programming contests.	KZ	5
BI-AND.21 Programming for the Android Operating System This course is presented in Czech.	KZ	4
BI-CS1 Programming in C#	KZ	4
The goal of the course is to introduce .NET Framework as a multi-language development platform. Then, programming language C#, its fundamenta operators, arrays, loops, definitions and calls of functions will be discussed. Attention is focused on the object oriented programming in C# - class de		
constructors, methods, properties, static members, Garbage Collector, inheritance and polymorphism, collections, delegates, and generics. Debugg		
well as work with files are emphasized.		
BI-PJV Programming in Java This course is presented in Czech. However, there is an English variant in the program Informatics (B1801 / 4753).	Z,ZK	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 developmen 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		
of study.		
BI-KOT Programing in Kotlin	Z,ZK	4
Kotlin is a modern, statically-styled object-functional language that exploits the extensive Java language ecosystem while delivering a number of adv		
The language is fully Java compliant and allows for mixed projects that preserve existing parts written in Java, and continue with the development of with minimum of boiler-plate code. Last but not least, Kotlin is suitable for designing of DSLs (Domain-Specific Languages).	a modern, object	-iuncuonal way
NI-PSL Programming in Scala	Z,ZK	4
The course introduces the modern programming language Scala which exploits object-functional paradigm. Scala comprises advance language feat		-
advance standard library. Scala enables to use of applications functional patterns e.g. H-List, Monads, etc. Scala is used by many powerful frameworks Scalaz, etc.	and libraries e.g. i	Play, Cassandra,
BI-PMA Programming in Mathematica	Z,ZK	4
Students will be working with modern technical and scientific software. Students will learn how to use different programming styles (functional program	amming, rule-base	ed programming,
etc.), how to create dynamic interactive applications and visualisations, data processing and presentations.	1/7	4
BI-PHP.1 Programing in PHP 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 t	
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		
register for this course in their 3rd semester of study.		
BI-PS2 Programming in shell 2 Students gain a general overview of available scripting languages, their syntax, semantics, programming style, data structures, pros and cons. In ad	dition_they gain a	4 deeper insight
into shell and some other particular scripting languages and will get practical experience with shell script programming.	anon, noy gain a	acopor molgrit
NI-PDD Data Preprocessing	Z,ZK	5
Students learn to prepare raw data for further processing and analysis. They learn what algorithms can be used to extract information from various dation time series, etc., and learn the skills to apply these theoretical concepts to solve specific problems in individual projects - e.g., extraction of character		-
pages.	nsites nom image	S OF HOIT WED
BI-PKM Introduction to mathematics	Z	4
This course is presented in Czech. NI-REV Reverse Engineering	Z,ZK	5
Students will get acquainted with the essentials of reverse engineering of computer software. They will learn how processes start and what happens	I ' I	-
is called. Students will understand how executable files are organized and how they interact with 3rd party libraries. Another part of the course is deeperturbation of the course is deeperturbation of the course is deeperturbation.		
applications written in C++. Students will also understand principles of disassemblers and obfuscation techniques. A part of the course will also be of debuggers and debugging work and which methods can be used to detect it. One of the lectures will be dedicated to the latest trends on the computed of the course will be dedicated to the latest trends on the computed of the course will be dedicated to the latest trends on the computed of the course will be dedicated to the latest trends on the computed of the course will be dedicated to the latest trends on the computed of the course will be dedicated to the latest trends on the computed of the course will be dedicated to the latest trends on the computed of the course will be dedicated to the latest trends on the computed of the course will be dedicated to the latest trends on the computed of the course will be dedicated to the latest trends on the computed of the course will be dedicated to the latest trends on the computed of the course will be dedicated to the latest trends on the computed of the course will be dedicated to the latest trends on the computed of the course will be dedicated to the latest trends on the computed of the course will be dedicated to the latest trends on the computed of the course will be dedicated to the latest trends on the computed of the course will be dedicated to the latest trends on the computed of the course will be dedicated to the latest trends of the course will be dedicated to the latest trends of the course will be dedicated to the latest trends of the course will be dedicated to the latest trends of the course will be dedicated to the latest trends of the course will be dedicated to the latest trends of the course will be dedicated to the latest trends of the course will be dedicated to the latest trends of the course will be dedicated to the latest trends of the course will be dedicated to the latest trends of the course will be dedicated to the latest trends of the course will be dedicated to the latest trends of the		
the course is on the seminars, where students will solve practically oriented tasks from the real world.		
BI-SCE1 Computer Engineering Seminar I	Z	4
The Seminar of Computer Engineering is a (s)elective course for students who want to deal with deeper topics of digital design, reliability and resistant are approached individually within the subject. Each student or group of students solves some interesting topic with the selected supervisor. Part of		
articles and other professional literature and/or work in K N laboratories. The capacity of the subject is limited by the possibilities of the seminar tea	-	
semester.		
BI-SCE2 Computer Engineering Seminar II		4
The Seminar of Computer Engineering is a (s)elective course for students who want to deal with deeper topics of digital design, reliability and resistant are approached individually within the subject. Each student or group of students solves some interesting topic with the selected supervisor. Part of		
articles and other professional literature and/or work in K N laboratories. The capacity of the subject is limited by the possibilities of the seminar tear	chers. The topics a	are new for each
semester.		0
BI-ST1 Network Technology 1 The subject is oriented to providing the students basic information and practical skills from the area of digital and IP networks. The subject is acredit	ed under the Cisc	3 o Netacad -
CCNA1 - R&S Introduction to Networks.		
BI-ST2 Network Technology 2	Z	3
This course is presented in Czech. BI-ST3 Network Technology 3	Z	3
Students will further enhance their knowledge acquired from previous BI-ST1 and BI-ST2 courses. Principles of routing and switching presented durin	I I	-
get further extended in the course. Students will be able to start fine-tune protocols' settings to gain certain advantages like increased efficiency, pre	-	
Simple topology, security, etc. BI-ST4 Network Technology 4	Z	3
BI-ST4 Network Technology 4 Students will further enhance their knowledge already acquired from previous BI-ST1, BI-ST2, and BI-ST3 courses. Principles of routing and switchi	I I	-
BI-ST2 courses got further extended in BI-ST3. Students were able to start fine-tune protocols' settings to gain certain advantages like increased eff	ficiency, predictabi	ility, extension
beyond a simple topology, security, etc. This module teaches students to configure and fine-tune Wide Area Networks and to experience a complete Broadcast Multiple Access) which radically differs from well-known Ethernet (broadcast) type of networks. Students will also manage router and swit		
recoveries, and emergency procedures. Also the security aspect is treated; students will learn possible intra- and inter-network attacks and the mitig		-
network running.		

BI-SKJ.21	Scripting Languages	Z,ZK	4
Students gain a genera	al overview of available scripting languages, their syntax, semantics, programming style, data structures, pros and cons. In ad	1 '	deeper insight
into shell and some oth	ner particular scripting languages and will get practical experience with shell script programming.		
BI-SOJ	Machine Oriented Languages	Z,ZK	4
	will gain an ability to create their own programs in the assembly language of the most common PC platform focusing on optima		
	on of software with hardware. Next, there will be discussed x86 specifics of the majority of OSes from the application point of vie	w linked to higher	level languages.
	used during reverse engineering, optimization, and evaluation of code security.		
FIT-SEP	World Economy and Business	Z,ZK	4
	ed in Czech. The course introduces students of technical university to the international business. It does that predominantly by d economy. Students get to know about different religions and cultures, necessary for doing business in diverse societies as we		
	to development, which are needed for the right investment decision. Seminars help to improve on the knowledge in the form		
	to take bachelor level of this course BIE-SEP as a prerequisite.		
BI-SEP	World Economy and Business	Z,ZK	4
	ed in Czech. The course introduces students of technical university to the international business. It does that predominantly by	· · ·	dual countries
and key regions of worl	d economy. Students get to know about different religions and cultures, necessary for doing business in diverse societies as we	II as indexes of eco	onomic freedom,
	nic development, which are needed for the right investment decision. Seminars help to improve on the knowledge in the form	of discussions bas	sed on individual
-	to take bachelor level of this course BIE-SEP as a prerequisite.		
NI-SYP	Parsing and Compilers	Z,ZK	5
	n the knowledge of fundamentals of automata theory, formal language and formal translation theories. Students gain knowledge	of various variants	and applications
	introduced to special applications of parsers, such as incremental and parallel parsing.		
BI-GIT	Version control system GIT	KZ	2
	uced to basic principles of version control systems. These principles will be then shown on DCVS Git both theoretically and pr on details will be shown. Students will be challenged to use Git as users, project managers, team leaders as well as Git serve		articular system
BIE-SEG		Z	0
	Systems Engineering class on systems engineering for bachelor students in computer science. The goal of the class is to introduce basic principles	-	Ű,
	or and memory virtualization. Seeing and actually understanding virtualization is the overarching theme of the class. After tak		
	nce between processes and threads as well as emulation and virtualization, what virtual memory is and how it works, what co	•	
	rocesses and threads synchronize efficiently to overcome concurrency for communication.	•	
TV2K1	Physical Education 2	Z	1
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 cla	ssical reading gro	up. The students
are treated individually	and concern themselves with interesting topics from the latest research in the area. Therefore, an integral part of the course i	s a work with scie	ntific papers and
other scholarly literatur	re. The capacity is limited by the the potentials of the teachers of the seminar.	-	
BI-TS2	Theoretical Seminar II	Z	4
	intended for students which want to come in deeper contact with contemporary theoretical computer science. It is mostly a cla		-
	and concern themselves with interesting topics from the latest research in the area. Therefore, an integral part of the course i	s a work with scie	ntific papers and
	re. The capacity is limited by the the potentials of the teachers of the seminar.	7	4
BI-TS3	Theoretical Seminar III		4
	intended for students which want to come in deeper contact with contemporary theoretical computer science. It is mostly a cla and concern themselves with interesting topics from the latest research in the area. Therefore, an integral part of the course i		
	re. The capacity is limited by the the potentials of the teachers of the seminar.	S a work with Sole	
BI-TS4	Theoretical Seminar IV	Z	4
	intended for students which want to come in deeper contact with contemporary theoretical computer science. It is mostly a cla		
	and concern themselves with interesting topics from the latest research in the area. Therefore, an integral part of the course i		
other scholarly literatur	re. The capacity is limited by the the potentials of the teachers of the seminar.		
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 well known in	the DevOps
	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	-
NI-TSP	Testing and Reliability	Z,ZK	5
-	vledge about circuit testing and about methods for increasing reliability and security. They will get practical skills to be able to		-
	tization and to use an ATPG for automatic test generation. They will be able to design easily testable circuits and systems with	n built-in-self-test e	equipment. They
	e, analyze, and control the reliability and availability of the designed circuits.	1/7	4
BI-QUA	Quality Assurance students to the fundamentals of testing and quality management. Students will learn what the role of a tester is in the contex	KZ	4
	experience hands-on application testing using both manual and automated testing. At the end of the semester, the student sho		
	of test scenarios, prepare test data, automate an appropriate portion of the scenarios, and prepare a report on the bugs found		-
FI-TOP	Academic writing	Z	2
-	ant and required part of research activity. It is not only about obtaining research results but also about applying them in the fo	1	1
publications can be us	eful for students not only in their own publishing activities but also in the preparation of a bachelor's or master's thesis. In the	course, students v	will learn how to
	, what parts such an article should have, and how the peer review process works. Students will also try their hand at presenting		-
	se will be taught in blocks, with one lecture at the beginning of the semester and one practicum in the middle of the semester.	. Dates will be det	ermined based
on the availability of er			
BI-CCN	Compiler Construction	Z,ZK	5
	class on compiler construction for bachelor students in computer science. The goal of the class is to introduce basic principle	•	students to
	and implementation of programming languages. Seeing and actually understanding self-compilation is the overarching theme		Α
BI-TEX	TeX and Typography ad in Czech. This course gives basics of programming in TeX (plain TeX, ConTeXt, LaTeX, OpTeX, LuaTeX). Te second part of	Z,ZK	4 s on typographic
rules.	so in orean. This course gives basies of programming in text (plain text, context, ratex, optex, ruatex). To second part of	110 000130 10005C	S Shi typographic
BI-EHD	Introduction to European Economic History	Z,ZK	3
	ed in Czech. However, there is an English variant in the program Informatics (B1801 / 4753).		

BI-KSA Cultural and Social Anthropology	ZK	2
The one-semester course aims to acquaint students with the basics of social and cultural anthropology as a scientific discipline dealing with the	e diversity of the world	- examples from
anthropological research from our "exotic" cultures (topics: kinship, religion, social exclusion, migration, globalization, , material culture, language	ge, health, history, deat	th, etc) will be
shown. The course is presented in Czech.		
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 be	ecome familiar with ba	sic commands
and techniques of a Unix-like system. Topics can be studied first theoretically and then practically verified in a virtual machine (terminal).		
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,		-
of optical network technology and on their solutions. The course will include the history of optical communications, an overview of passive complete the solution of the solut		
dispersion compensators, and others), and an overview of active components (optical switches and amplifiers, high-speed coherent transmission)		-
the most up-to-date topics presented at premium research conferences, such as ECOC or OFC. Attention will also be paid to new applications,		
ultrastable frequency transfer, or sensor networks. The labs will focus on real work with optical components and on measurement of their paran		
	leters. Students will so	ive real lasks
	7 71	_
NI-VCC Virtualization and Cloud Computing	Z,ZK	5
Students will gain knowledge of architectures of large computer systems that are used in data centers and computer infrastructure of companies	-	
acquainted with virtualization principles, tools and technologies that serve to facilitate and automate configuration, testing and monitoring, and	to efficiently operate ar	nd optimize the
performance parameters of modern computer systems. Theoretically and practically, they will get acquainted with containerization as the most of	effective technology to	day for the
management of complex computer systems and with specific technologies of cloud systems. Finally, they will learn the principles and gain practic	al skills in the use of mo	odern integration
and development tools (Continuous integration and development).		
BI-VHS Virtual game worlds	ZK	4
The course leads students to create a complex virtual world. The course is a continuation of basic graphical courses (MGA, PGR, BLE,). This cur		e is furthermore
complemented by the theory of game design, principles of writing dialogues and characters in order to create a functional and complex virtual		-
the course MI-PVR with the task of converting scenes and their dynamics into a fully virtual environment suitable for VR devices.		
	KZ	4
BI-VR1 Virtual reality I		-
Introduction to Virtual Reality (VR), virtual reality operating system and virtual reality creation. Another objective is to meet the rules and require		
The course focuses on the ways of teaching using virtual reality technologies and interactive activities in educational virtual 3D worlds. It improves the second s	es computational thinl	king, empathy
and shared social activities.		
BI-VR2 Virtual reality II	KZ	3
Continuation of the course Virtual Reality I. The new course focuses on collaborative telepresence, spatial computing and social life of avatars.	The objective is to deve	elop applications
for computer science and gamification in various social metaverse and desktop engines.	-	
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		-
issue from applications to theory. Together, we will first refresh the basic knowledge needed to design and analyze algorithms and introduce so		
with the active participation of students, we will focus on solving popular and easily formulated problems from various areas of (not only theoret	,	
will select problems to be solved will include, for example, graph theory, combinatorial and algorithmic game theory, approximation algorithms,	optimization and more.	Students will
also try to implement solutions to the studied problems with a special focus on the effective use of existing tools.		
BI-VMM Selected Mathematical Methods	Z,ZK	4
		-
BI-VMM Selected Mathematical Methods	then address Fourier s	eries and their
BI-VMM Selected Mathematical Methods The lecture begins with an introduction to the analysis of complex functions of a complex variable. Next, we present the Lebesgue integral. We	then address Fourier s the wavelet transform	eries and their
BI-VMM Selected Mathematical Methods The lecture begins with an introduction to the analysis of complex functions of a complex variable. Next, we present the Lebesgue integral. We properties. Further, we introduce and study the properties of the Discrete Fourier Transform (DFT) and its fast implementation (FFT). We discus the linear programming problem in more detail and its solution using the Simplex algorithm. Each topic is demonstrated with interesting example	then address Fourier s is the wavelet transforr es.	eries and their n. We examine
BI-VMM Selected Mathematical Methods The lecture begins with an introduction to the analysis of complex functions of a complex variable. Next, we present the Lebesgue integral. We properties. Further, we introduce and study the properties of the Discrete Fourier Transform (DFT) and its fast implementation (FFT). We discus the linear programming problem in more detail and its solution using the Simplex algorithm. Each topic is demonstrated with interesting example NI-VYC Computability	then address Fourier s the wavelet transform	eries and their
BI-VMM Selected Mathematical Methods The lecture begins with an introduction to the analysis of complex functions of a complex variable. Next, we present the Lebesgue integral. We properties. Further, we introduce and study the properties of the Discrete Fourier Transform (DFT) and its fast implementation (FFT). We discus the linear programming problem in more detail and its solution using the Simplex algorithm. Each topic is demonstrated with interesting example NI-VYC Computability Classical theory of recursive functions and effective computability.	then address Fourier s is the wavelet transforr es. Z,ZK	eries and their n. We examine 4
BI-VMM Selected Mathematical Methods The lecture begins with an introduction to the analysis of complex functions of a complex variable. Next, we present the Lebesgue integral. We properties. Further, we introduce and study the properties of the Discrete Fourier Transform (DFT) and its fast implementation (FFT). We discus the linear programming problem in more detail and its solution using the Simplex algorithm. Each topic is demonstrated with interesting example NI-VYC Computability Classical theory of recursive functions and effective computability. BI-ZS10 Bachelor internship abroad for 10 credits	then address Fourier s as the wavelet transforr es. Z,ZK Z	eries and their n. We examine 4 10
BI-VMM Selected Mathematical Methods The lecture begins with an introduction to the analysis of complex functions of a complex variable. Next, we present the Lebesgue integral. We properties. Further, we introduce and study the properties of the Discrete Fourier Transform (DFT) and its fast implementation (FFT). We discus the linear programming problem in more detail and its solution using the Simplex algorithm. Each topic is demonstrated with interesting exampl NI-VYC Computability Classical theory of recursive functions and effective computability. BI-ZS10 Bachelor internship abroad for 10 credits Each student can once within his / her bachelor's study programme have a foreign internship at a foreign university or other foreign scientific ar	then address Fourier s s the wavelet transforr es. Z,ZK Z d/or research institution	eries and their n. We examine 4 10 n. Before the
BI-VMM Selected Mathematical Methods The lecture begins with an introduction to the analysis of complex functions of a complex variable. Next, we present the Lebesgue integral. We properties. Further, we introduce and study the properties of the Discrete Fourier Transform (DFT) and its fast implementation (FFT). We discus the linear programming problem in more detail and its solution using the Simplex algorithm. Each topic is demonstrated with interesting example NI-VYC Computability Classical theory of recursive functions and effective computability. BI-ZS10 Bachelor internship abroad for 10 credits Each student can once within his / her bachelor's study programme have a foreign internship at a foreign university or other foreign scientific ar internship the Dean of the FIT, or the vice-dean for study affairs assesses the professional content. The student must provide evidence of the professional content.	then address Fourier s as the wavelet transforr es. Z,ZK Z d/or research institution rofessional content and	eries and their n. We examine 4 10 n. Before the d extent of the
BI-VMM Selected Mathematical Methods The lecture begins with an introduction to the analysis of complex functions of a complex variable. Next, we present the Lebesgue integral. We properties. Further, we introduce and study the properties of the Discrete Fourier Transform (DFT) and its fast implementation (FFT). We discus the linear programming problem in more detail and its solution using the Simplex algorithm. Each topic is demonstrated with interesting example NI-VYC Computability Classical theory of recursive functions and effective computability. BI-ZS10 Bachelor internship abroad for 10 credits Each student can once within his / her bachelor's study programme have a foreign internship at a foreign university or other foreign scientific ar internship the Dean of the FIT, or the vice-dean for study affairs assesses the professional content. The student must provide evidence of the printernship. Auxiliary courses BI-ZS10, BI-ZS20, BI-ZS30 are used used for the evidence and evaluation of the internship in IS KOS. Every 10 cm	then address Fourier s as the wavelet transforr es. Z,ZK d/or research institution rofessional content and edits correspond to 4 w	eries and their n. We examine 4 10 n. Before the d extent of the veeks of full-time
BI-VMM Selected Mathematical Methods The lecture begins with an introduction to the analysis of complex functions of a complex variable. Next, we present the Lebesgue integral. We properties. Further, we introduce and study the properties of the Discrete Fourier Transform (DFT) and its fast implementation (FFT). We discus the linear programming problem in more detail and its solution using the Simplex algorithm. Each topic is demonstrated with interesting example NI-VYC Computability Classical theory of recursive functions and effective computability. BI-ZS10 Bachelor internship abroad for 10 credits Each student can once within his / her bachelor's study programme have a foreign internship at a foreign university or other foreign scientific ar internship the Dean of the FIT, or the vice-dean for study affairs assesses the professional content. The student must provide evidence of the professional content.	then address Fourier s as the wavelet transforr es. Z,ZK d/or research institution rofessional content and edits correspond to 4 w	eries and their n. We examine 4 10 n. Before the d extent of the veeks of full-time
BI-VMM Selected Mathematical Methods The lecture begins with an introduction to the analysis of complex functions of a complex variable. Next, we present the Lebesgue integral. We properties. Further, we introduce and study the properties of the Discrete Fourier Transform (DFT) and its fast implementation (FFT). We discus the linear programming problem in more detail and its solution using the Simplex algorithm. Each topic is demonstrated with interesting example NI-VYC Computability Classical theory of recursive functions and effective computability. BI-ZS10 Bachelor internship abroad for 10 credits Each student can once within his / her bachelor's study programme have a foreign internship at a foreign university or other foreign scientific ar internship the Dean of the FIT, or the vice-dean for study affairs assesses the professional content. The student must provide evidence of the printernship. Auxiliary courses BI-ZS10, BI-ZS20, BI-ZS30 are used used for the evidence and evaluation of the internship in IS KOS. Every 10 cm	then address Fourier s as the wavelet transforr es. Z,ZK d/or research institution rofessional content and edits correspond to 4 w	eries and their n. We examine 4 10 n. Before the d extent of the veeks of full-time
BI-VMM Selected Mathematical Methods The lecture begins with an introduction to the analysis of complex functions of a complex variable. Next, we present the Lebesgue integral. We properties. Further, we introduce and study the properties of the Discrete Fourier Transform (DFT) and its fast implementation (FFT). We discuss the linear programming problem in more detail and its solution using the Simplex algorithm. Each topic is demonstrated with interesting example NI-VYC Computability Classical theory of recursive functions and effective computability. BI-ZS10 Bachelor internship abroad for 10 credits Each student can once within his / her bachelor's study programme have a foreign internship at a foreign university or other foreign scientific ar internship the Dean of the FIT, or the vice-dean for study affairs assesses the professional content. The student must provide evidence of the p internship. Auxiliary courses BI-ZS10, BI-ZS20, BI-ZS30 are used used for the evidence and evaluation of the internship in IS KOS. Every 10 credits a student can earn for one internship is 30 credits. This amount can be di exceeds the academic year's dead-line.	then address Fourier s as the wavelet transforr es. Z,ZK d/or research institution rofessional content and edits correspond to 4 w	eries and their n. We examine 4 10 n. Before the d extent of the veeks of full-time
BI-VMM Selected Mathematical Methods The lecture begins with an introduction to the analysis of complex functions of a complex variable. Next, we present the Lebesgue integral. We properties. Further, we introduce and study the properties of the Discrete Fourier Transform (DFT) and its fast implementation (FFT). We discuss the linear programming problem in more detail and its solution using the Simplex algorithm. Each topic is demonstrated with interesting example NI-VYC Computability Classical theory of recursive functions and effective computability. BI-ZS10 Bachelor internship abroad for 10 credits Each student can once within his / her bachelor's study programme have a foreign internship at a foreign university or other foreign scientific ar internship the Dean of the FIT, or the vice-dean for study affairs assesses the professional content. The student must provide evidence of the p internship. Auxiliary courses BI-ZS10, BI-ZS20, BI-ZS30 are used used for the evidence and evaluation of the internship in IS KOS. Every 10 cm employment with a foreign institution. The maximum number of credits a student can earn for one internship is 30 credits. This amount can be di exceeds the academic year's dead-line.	then address Fourier s as the wavelet transforr es. Z,ZK d/or research institution rofessional content and edits correspond to 4 w vided into two subjects Z	eries and their n. We examine 4 10 n. Before the d extent of the veeks of full-time s if the internship 20
BI-VMM Selected Mathematical Methods The lecture begins with an introduction to the analysis of complex functions of a complex variable. Next, we present the Lebesgue integral. We properties. Further, we introduce and study the properties of the Discrete Fourier Transform (DFT) and its fast implementation (FFT). We discuss the linear programming problem in more detail and its solution using the Simplex algorithm. Each topic is demonstrated with interesting example NI-VYC Computability Classical theory of recursive functions and effective computability. BI-ZS10 Bachelor internship abroad for 10 credits Each student can once within his / her bachelor's study programme have a foreign internship at a foreign university or other foreign scientific ar internship. Auxiliary courses BI-ZS10, BI-ZS20, BI-ZS30 are used used for the evidence and evaluation of the internship in IS KOS. Every 10 credits a student can earn for one internship is 30 credits. This amount can be di exceeds the academic year's dead-line. BI-ZS20 Bachelor internship abroad for 20 credits Each student can once within his / her bachelor's study programme have a foreign internship at a foreign university or other foreign scientific ar internship. Auxiliary courses BI-ZS10, BI-ZS20, BI-ZS30 are used used for the evidence and evaluation of the internship in IS KOS. Every 10 credits BI-ZS20 Bachelor internship abroad for 20 credits Each student can once within his / her bachelor's study programme have a foreign internship at a foreign university or other foreign scientific ar	then address Fourier s as the wavelet transforr es. Z,ZK d/or research institution rofessional content and edits correspond to 4 w vided into two subjects Z d/or research institution	eries and their n. We examine 4 10 n. Before the d extent of the veeks of full-time s if the internship 20 n. Before the
BI-VMM Selected Mathematical Methods The lecture begins with an introduction to the analysis of complex functions of a complex variable. Next, we present the Lebesgue integral. We properties. Further, we introduce and study the properties of the Discrete Fourier Transform (DFT) and its fast implementation (FFT). We discuss the linear programming problem in more detail and its solution using the Simplex algorithm. Each topic is demonstrated with interesting example NI-VYC Computability Classical theory of recursive functions and effective computability. BI-ZS10 Bachelor internship abroad for 10 credits Each student can once within his / her bachelor's study programme have a foreign internship at a foreign university or other foreign scientific ar internship. Auxiliary courses BI-ZS10, BI-ZS20, BI-ZS30 are used used for the evidence and evaluation of the internship in IS KOS. Every 10 creemployment with a foreign institution. The maximum number of credits a student can earn for one internship is 30 credits. This amount can be di exceeds the academic year's dead-line. BI-ZS20 Bachelor internship abroad for 20 credits Each student can once within his / her bachelor's study programme have a foreign internship at a foreign university or other foreign scientific ar internship is 30 credits. This amount can be di exceeds the academic year's dead-line. BI-ZS20 Bachelor internship abroad for 20 credits Each student can once within his / her bachelor's study programme have a foreign internship at a foreign university or other foreign scientific ar internship the Dean of the FIT, or the vice-dean fo	then address Fourier s as the wavelet transforr es. Z,ZK d/or research institution rofessional content and edits correspond to 4 w vided into two subjects Z d/or research institution rofessional content and	eries and their n. We examine 4 10 n. Before the d extent of the veeks of full-time is fi the internship 20 n. Before the d extent of the
BI-VMM Selected Mathematical Methods The lecture begins with an introduction to the analysis of complex functions of a complex variable. Next, we present the Lebesgue integral. We properties. Further, we introduce and study the properties of the Discrete Fourier Transform (DFT) and its fast implementation (FFT). We discus the linear programming problem in more detail and its solution using the Simplex algorithm. Each topic is demonstrated with interesting exampl NI-VYC Computability Classical theory of recursive functions and effective computability. BI-ZS10 Bachelor internship abroad for 10 credits Each student can once within his / her bachelor's study programme have a foreign internship at a foreign university or other foreign scientific ar internship. Auxiliary courses BI-ZS10, BI-ZS20 are used used for the evidence and evaluation of the internship in IS KOS. Every 10 credits BI-ZS20 Bachelor internship abroad for 20 credits Each student can once within his / her bachelor's study programme have a foreign internship is 30 credits. This amount can be di exceeds the academic year's dead-line. BI-ZS20 Bachelor internship abroad for 20 credits Each student can once within his / her bachelor's study programme have a foreign internship at a foreign university or other foreign scientific ar internship abroad for 20 credits BI-ZS20 Bachelor internship abroad for 20 credits Each student can once within his / her bachelor's study programme have a foreign internship at a foreign university or other foreign s	then address Fourier s as the wavelet transforr es. Z,ZK d/or research institution rofessional content and edits correspond to 4 w vided into two subjects Z d/or research institution rofessional content and edits correspond to 4 w	eries and their n. We examine 4 10 n. Before the d extent of the veeks of full-time is fi the internship 20 n. Before the d extent of the veeks of full-time
BI-VMM Selected Mathematical Methods The lecture begins with an introduction to the analysis of complex functions of a complex variable. Next, we present the Lebesgue integral. We properties. Further, we introduce and study the properties of the Discrete Fourier Transform (DFT) and its fast implementation (FFT). We discus the linear programming problem in more detail and its solution using the Simplex algorithm. Each topic is demonstrated with interesting exampl NI-VYC Computability Classical theory of recursive functions and effective computability. BI-ZS10 Bachelor internship abroad for 10 credits Each student can once within his / her bachelor's study programme have a foreign internship at a foreign university or other foreign scientific ar internship. Auxiliary courses BI-ZS10, BI-ZS20, BI-ZS30 are used used for the evidence and evaluation of the internship in IS KOS. Every 10 creently exceeds the academic year's dead-line. BI-ZS20 Bachelor internship abroad for 20 credits Each student can once within his / her bachelor's study programme have a foreign internship at a foreign university or other foreign scientific ar internship in 30 credits. This amount can be di exceeds the academic year's dead-line. BI-ZS20 Bachelor internship abroad for 20 credits Each student can once within his / her bachelor's study programme have a foreign internship at a foreign university or other foreign scientific ar internship the Dean of the FIT, or the vice-dean for study affairs assesses the professional content. The student must provide evidence of the pi internship haconce within his / her bachelor'	then address Fourier s as the wavelet transforr es. Z,ZK d/or research institution rofessional content and edits correspond to 4 w vided into two subjects Z d/or research institution rofessional content and edits correspond to 4 w	eries and their n. We examine 4 10 n. Before the d extent of the veeks of full-time is fi the internship 20 n. Before the d extent of the veeks of full-time
BI-VMM Selected Mathematical Methods The lecture begins with an introduction to the analysis of complex functions of a complex variable. Next, we present the Lebesgue integral. We properties. Further, we introduce and study the properties of the Discrete Fourier Transform (DFT) and its fast implementation (FFT). We discuss the linear programming problem in more detail and its solution using the Simplex algorithm. Each topic is demonstrated with interesting example NI-VYC Computability Classical theory of recursive functions and effective computability. BI-ZS10 Bachelor internship abroad for 10 credits Each student can once within his / her bachelor's study programme have a foreign internship at a foreign university or other foreign scientific ar internship the Dean of the FIT, or the vice-dean for study affairs assesses the professional content. The student must provide evidence of the p internship. Auxiliary courses BI-ZS10, BI-ZS20, BI-ZS30 are used used for the evidence and evaluation of the internship in IS KOS. Every 10 credits BI-ZS20 Bachelor internship abroad for 20 credits Each student can once within his / her bachelor's study programme have a foreign internship at a foreign university or other foreign scientific ar internship. Auxiliary courses BI-ZS10, BI-ZS20 are used used for the evidence and evaluation of the internship in IS KOS. Every 10 credits Each student can once within his / her bachelor's study programme have a foreign internship at a foreign university or other foreign scientific ar internship the Dean of the FIT, or the vice-dean for study affairs assesses the professional content. The student must provide evidence of the p internship the Dean of the	then address Fourier s as the wavelet transforr es. Z,ZK d/or research institution rofessional content and edits correspond to 4 w vided into two subjects Z d/or research institution rofessional content and edits correspond to 4 w vided into two subjects	eries and their n. We examine 4 10 n. Before the d extent of the veeks of full-time is the internship 20 n. Before the d extent of the veeks of full-time is the internship
BI-VMM Selected Mathematical Methods The lecture begins with an introduction to the analysis of complex functions of a complex variable. Next, we present the Lebesgue integral. We properties. Further, we introduce and study the properties of the Discrete Fourier Transform (DFT) and its fast implementation (FFT). We discus the linear programming problem in more detail and its solution using the Simplex algorithm. Each topic is demonstrated with interesting exampl NI-VYC Computability Classical theory of recursive functions and effective computability. BI-ZS10 Bachelor internship abroad for 10 credits Each student can once within his / her bachelor's study programme have a foreign internship at a foreign university or other foreign scientific ar internship the Dean of the FIT, or the vice-dean for study affairs assesses the professional content. The student must provide evidence of the p internship. Auxiliary courses BI-ZS10, BI-ZS20, BI-ZS30 are used used for the evidence and evaluation of the internship in IS KOS. Every 10 credits BI-ZS20 Bachelor internship abroad for 20 credits Each student can once within his / her bachelor's study programme have a foreign internship is 30 credits. This amount can be di exceeds the academic year's dead-line. BI-ZS20 Bachelor internship abroad for 20 credits Each student can once within his / her bachelor's study programme have a foreign internship at a foreign university or other foreign scientific ar internship the Dean of the FIT, or the vice-dean for study affairs assesses the professional content. The student must provide evidence of the pi intern	then address Fourier s as the wavelet transformes. Z,ZK d/or research institution rofessional content and edits correspond to 4 w vided into two subjects Z d/or research institution rofessional content and edits correspond to 4 w vided into two subjects Z	eries and their n. We examine 4 10 n. Before the d extent of the veeks of full-time if the internship 20 n. Before the d extent of the veeks of full-time if the internship 30
BI-VMM Selected Mathematical Methods The lecture begins with an introduction to the analysis of complex functions of a complex variable. Next, we present the Lebesgue integral. We properties. Further, we introduce and study the properties of the Discrete Fourier Transform (DFT) and its fast implementation (FFT). We discuss the linear programming problem in more detail and its solution using the Simplex algorithm. Each topic is demonstrated with interesting example NI-VYC Computability Classical theory of recursive functions and effective computability. BI-ZS10 Bachelor internship abroad for 10 credits Each student can once within his / her bachelor's study affairs assesses the professional content. The student must provide evidence of the printernship. Auxiliary courses BI-ZS10, BI-ZS20, BI-ZS30 are used used for the evidence and evaluation of the internship in IS KOS. Every 10 credits BI-ZS20 Bachelor internship abroad for 20 credits Each student can once within his / her bachelor's study programme have a foreign internship at a foreign university or other foreign scientific ar internship the Dean of the FIT, or the vice-dean for study affairs assesses the professional content. The student must provide evidence of the printernship the Dean of the FIT, or the bachelor's study programme have a foreign internship at a foreign university or other foreign scientific ar internship the Dean of the FIT, or the vice-dean for study affairs assesses the professional content. The student must provide evidence of the printernship the Dean of the FIT, or the bachelor's study programme have a foreign internship at a foreign university or other foreign scientific ar internship the Dean of the FIT, or the vice-dean for study	then address Fourier s as the wavelet transforr es. Z,ZK d/or research institution rofessional content and edits correspond to 4 w vided into two subjects Z d/or research institution rofessional content and edits correspond to 4 w vided into two subjects Z d/or research institution	eries and their n. We examine 4 10 n. Before the d extent of the veeks of full-time if the internship 20 n. Before the d extent of the veeks of full-time if the internship 30 n. Before the
BI-VMM Selected Mathematical Methods The lecture begins with an introduction to the analysis of complex functions of a complex variable. Next, we present the Lebesgue integral. We properties. Further, we introduce and study the properties of the Discrete Fourier Transform (DFT) and its fast implementation (FFT). We discuss the linear programming problem in more detail and its solution using the Simplex algorithm. Each topic is demonstrated with interesting example NI-VYC Computability Computability Classical theory of recursive functions and effective computability. Bl-ZS10 Bachelor internship abroad for 10 credits Each student can once within his / her bachelor's study affairs assesses the professional content. The student must provide evidence of the printernship. Auxiliary courses BI-ZS10, BI-ZS20 are used used for the evidence and evaluation of the internship in IS KOS. Every 10 cr employment with a foreign institution. The maximum number of credits a student can earn for one internship is 30 credits. This amount can be diexceeds the academic year's dead-line. BI-ZS20 Bachelor internship abroad for 20 credits Each student can once within his / her bachelor's study programme have a foreign internship at a foreign university or other foreign scientific ar internship the Dean of the FIT, or the vice-dean for study affairs assesses the professional content. The student must provide evidence of the p internship the Dean of the FIT, or the vice-dean for study affairs assesses the professional content. The student must provide evidence of the p internship the Dean of the FIT, or the vice-dean for study affairs assesses the professional content. The student must provide evidence of the p internshi	then address Fourier s as the wavelet transforr es. Z,ZK d/or research institution rofessional content and edits correspond to 4 w vided into two subjects Z d/or research institution rofessional content and edits correspond to 4 w vided into two subjects Z d/or research institution rofessional content and edits correspond to 4 w	eries and their n. We examine 4 10 n. Before the d extent of the veeks of full-time if the internship 20 n. Before the d extent of the veeks of full-time if the internship 30 n. Before the d extent of the
BI-VMM Selected Mathematical Methods The lecture begins with an introduction to the analysis of complex functions of a complex variable. Next, we present the Lebesgue integral. We properties. Further, we introduce and study the properties of the Discrete Fourier Transform (DFT) and its fast implementation (FFT). We discus the linear programming problem in more detail and its solution using the Simplex algorithm. Each topic is demonstrated with interesting exampl NI-VYC Computability Classical theory of recursive functions and effective computability. BI-ZS10 Bachelor internship abroad for 10 credits Each student can once within his / her bachelor's study programme have a foreign internship at a foreign university or other foreign scientific ar internship the Dean of the FIT, or the vice-dean for study affairs assesses the professional content. The student must provide evidence of the p internship. Auxiliary courses BI-ZS10, BI-ZS20, BI-ZS30 are used used for the evidence and evaluation of the internship in IS KOS. Every 10 cre employment with a foreign institution. The maximum number of credits a student can earn for one internship is 30 credits. This amount can be di exceeds the academic year's dead-line. BI-ZS20 Bachelor internship abroad for 20 credits Each student can once within his / her bachelor's study programme have a foreign internship at a foreign university or other foreign scientific ar internship the Dean of the FIT, or the vice-dean for study affairs assesses the professional content. The student must provide evidence of the p internship. Auxiliary courses BI-ZS10, BI-ZS20, BI-ZS30 are used used for the evidence and evaluation of the internship in IS KOS. Ever	then address Fourier s as the wavelet transformes. Z,ZK d/or research institution rofessional content and edits correspond to 4 w vided into two subjects Z d/or research institution rofessional content and edits correspond to 4 w vided into two subjects Z d/or research institution rofessional content and edits correspond to 4 w	eries and their n. We examine 4 10 n. Before the d extent of the veeks of full-time if the internship 20 n. Before the d extent of the veeks of full-time if the internship 30 n. Before the d extent of the veeks of full-time
BI-VMM Selected Mathematical Methods The lecture begins with an introduction to the analysis of complex functions of a complex variable. Next, we present the Lebesgue integral. We properties. Further, we introduce and study the properties of the Discrete Fourier Transform (DFT) and its fast implementation (FFT). We discuss the linear programming problem in more detail and its solution using the Simplex algorithm. Each topic is demonstrated with interesting example NI-VYC Computability Computability Classical theory of recursive functions and effective computability. Bl-ZS10 Bachelor internship abroad for 10 credits Each student can once within his / her bachelor's study affairs assesses the professional content. The student must provide evidence of the printernship. Auxiliary courses BI-ZS10, BI-ZS20, BI-ZS30 are used used for the evidence and evaluation of the internship in IS KOS. Every 10 credits BI-ZS20 Bachelor internship abroad for 20 credits Each student can once within his / her bachelor's study programme have a foreign internship at a foreign university or other foreign scientific ar internship. Auxiliary courses BI-ZS10, BI-ZS20, BI-ZS30 are used used for the evidence and evaluation of the internship in IS KOS. Every 10 cre employment with a foreign institution. The maximum number of credits a student can earn for one internship is 30 credits. This amount can be di exceeds the academic year's dead-line. BI-ZS20 Bachelor internship abroad for 20 credits Each student can once within his / her bachelor's study affairs assesses the professional content. The student must provide evidence of the printe	then address Fourier s as the wavelet transformes. Z,ZK d/or research institution rofessional content and edits correspond to 4 w vided into two subjects Z d/or research institution rofessional content and edits correspond to 4 w vided into two subjects Z d/or research institution rofessional content and edits correspond to 4 w	eries and their n. We examine 4 10 n. Before the d extent of the veeks of full-time if the internship 20 n. Before the d extent of the veeks of full-time if the internship 30 n. Before the d extent of the veeks of full-time
BI-VMM Selected Mathematical Methods The lecture begins with an introduction to the analysis of complex functions of a complex variable. Next, we present the Lebesgue integral. We properties. Further, we introduce and study the properties of the Discrete Fourier Transform (DFT) and its fast implementation (FFT). We discus the linear programming problem in more detail and its solution using the Simplex algorithm. Each topic is demonstrated with interesting exampl NI-VYC Computability Classical theory of recursive functions and effective computability. BI-ZS10 Bachelor internship abroad for 10 credits Each student can once within his / her bachelor's study programme have a foreign internship at a foreign university or other foreign scientific ar internship the Dean of the FIT, or the vice-dean for study affairs assesses the professional content. The student must provide evidence of the p internship. Auxiliary courses BI-ZS10, BI-ZS20, BI-ZS30 are used used for the evidence and evaluation of the internship in IS KOS. Every 10 cre employment with a foreign institution. The maximum number of credits a student can earn for one internship is 30 credits. This amount can be di exceeds the academic year's dead-line. BI-ZS20 Bachelor internship abroad for 20 credits Each student can once within his / her bachelor's study programme have a foreign internship at a foreign university or other foreign scientific ar internship the Dean of the FIT, or the vice-dean for study affairs assesses the professional content. The student must provide evidence of the p internship. Auxiliary courses BI-ZS10, BI-ZS20, BI-ZS30 are used used for the evidence and evaluation of the internship in IS KOS. Ever	then address Fourier s as the wavelet transformes. Z,ZK d/or research institution rofessional content and edits correspond to 4 w vided into two subjects Z d/or research institution rofessional content and edits correspond to 4 w vided into two subjects Z d/or research institution rofessional content and edits correspond to 4 w	eries and their n. We examine 4 10 n. Before the d extent of the veeks of full-time if the internship 20 n. Before the d extent of the veeks of full-time if the internship 30 n. Before the d extent of the veeks of full-time
BI-VMM Selected Mathematical Methods The lecture begins with an introduction to the analysis of complex functions of a complex variable. Next, we present the Lebesgue integral. We properties. Further, we introduce and study the properties of the Discrete Fourier Transform (DFT) and its fast implementation (FFT). We discus the linear programming problem in more detail and its solution using the Simplex algorithm. Each topic is demonstrated with interesting exampl NI-VYC Computability Classical theory of recursive functions and effective computability. BI-ZS10 Bachelor internship abroad for 10 credits Each student can once within his / her bachelor's study programme have a foreign internship at a foreign university or other foreign scientific ar internship the Dean of the FIT, or the vice-dean for study affairs assesses the professional content. The student must provide evidence of the p internship and institution. The maximum number of credits a student can earn for one internship is 30 credits. This amount can be di exceeds the academic year's dead-line. BI-ZS20 Bachelor internship abroad for 20 credits Each student can once within his / her bachelor's study programme have a foreign internship at a foreign university or other foreign scientific ar internship the Dean of the FIT, or the vice-dean for study affairs assesses the professional content. The student must provide evidence of the p internship at soreign institution. The maximum number of credits a student can earn for one internship in IS KOS. Every 10 cr employment with a foreign institution. The maximum number of credits a student can earn for one internship in IS KOS. Every 10 cr employment with a foreign institut	then address Fourier s as the wavelet transformes. Z,ZK d/or research institution rofessional content and edits correspond to 4 w vided into two subjects Z d/or research institution rofessional content and edits correspond to 4 w vided into two subjects Z d/or research institution rofessional content and edits correspond to 4 w	eries and their n. We examine 4 10 n. Before the d extent of the veeks of full-time if the internship 20 n. Before the d extent of the veeks of full-time if the internship 30 n. Before the d extent of the veeks of full-time
BI-VMM Selected Mathematical Methods The lecture begins with an introduction to the analysis of complex functions of a complex variable. Next, we present the Lebesgue integral. We properties. Further, we introduce and study the properties of the Discrete Fourier Transform (DFT) and its fast implementation (FFT). We discus the linear programming problem in more detail and its solution using the Simplex algorithm. Each topic is demonstrated with interesting exampl NI-VYC Computability Classical theory of recursive functions and effective computability. BI-ZS10 Bachelor internship abroad for 10 credits Each student can once within his / her bachelor's study programme have a foreign internship at a foreign university or other foreign scientific ar internship the Dean of the FIT, or the vice-dean for study affairs assesses the professional content. The student must provide evidence of the p internship at oreign institution. The maximum number of credits a student can earn for one internship is 30 credits. This amount can be di exceeds the academic year's dead-line. BI-ZS20 Bachelor internship abroad for 20 credits Each student can once within his / her bachelor's study programme have a foreign internship at a foreign university or other foreign scientific ar internship the Dean of the FIT, or the vice-dean for study affairs assesses the professional content. The student must provide evidence of the p internship at coreign university or other foreign scientific ar internship the Dean of the FIT, or the vice-dean for study affairs assesses the professional content. The student must provide evidence of the p internship the Dean of the FIT, or the vice-dean for study affairs assesses	then address Fourier s as the wavelet transformes. Z,ZK d/or research institution rofessional content and edits correspond to 4 wided into two subjects Z d/or research institution rofessional content and edits correspond to 4 wided into two subjects Z d/or research institution rofessional content and edits correspond to 4 wided into two subjects KZ	eries and their n. We examine 4 10 n. Before the d extent of the veeks of full-time if the internship 20 n. Before the d extent of the veeks of full-time if the internship 30 n. Before the d extent of the veeks of full-time if the internship 30 n. Before the d extent of the veeks of full-time if the internship
BI-VMM Selected Mathematical Methods The lecture begins with an introduction to the analysis of complex functions of a complex variable. Next, we present the Lebesgue integral. We properties. Further, we introduce and study the properties of the Discrete Fourier Transform (DFT) and its fast implementation (FFT). We discus the linear programming problem in more detail and its solution using the Simplex algorithm. Each topic is demonstrated with interesting exampl NI-VYC Computability Classical theory of recursive functions and effective computability. BI-ZS10 Bachelor internship abroad for 10 credits Each student can once within his / her bachelor's study programme have a foreign internship at a foreign university or other foreign scientific ar internship. Auxiliary courses BI-ZS10, BI-ZS20, BI-ZS30 are used used for the evidence and evaluation of the internship in IS KOS. Every 10 cr employment with a foreign institution. The maximum number of credits a student can earn for one internship is 30 credits. This amount can be di exceeds the academic year's dead-line. BI-ZS20 Bachelor internship abroad for 20 credits Each student can once within his / her bachelor's study programme have a foreign internship at a foreign university or other foreign scientific ar internship. He Dean of the FIT, or the vice-dean for study affairs assesses the professional content. The student must provide evidence of the p internship. Auxiliary courses BI-ZS10, BI-ZS20, BI-ZS30 are used used for the evidence and evaluation of the internship in IS KOS. Every 10 cr employment with a foreign institution. The maximum number of credi	then address Fourier s as the wavelet transformes. Z,ZK d/or research institution rofessional content and edits correspond to 4 w vided into two subjects Z d/or research institution rofessional content and edits correspond to 4 w vided into two subjects Z d/or research institution rofessional content and edits correspond to 4 w vided into two subjects Z d/or research institution rofessional content and edits correspond to 4 w vided into two subjects KZ aim of the course is to	eries and their n. We examine 4 10 n. Before the d extent of the veeks of full-time if the internship 20 n. Before the d extent of the veeks of full-time if the internship 30 n. Before the d extent of the veeks of full-time if the internship 4 b teach students
BI-VMM Selected Mathematical Methods The lecture begins with an introduction to the analysis of complex functions of a complex variable. Next, we present the Lebesgue integral. We properties. Further, we introduce and study the properties of the Discrete Fourier Transform (DFT) and its fast implementation (FFT). We discus the linear programming problem in more detail and its solution using the Simplex algorithm. Each topic is demonstrated with interesting example MI-VYC Computability Classical theory of recursive functions and effective computability. BI-ZS10 Bachelor internship abroad for 10 credits Each student can once within his / her bachelor's study programme have a foreign internship at a foreign university or other foreign scientific ar internship. Auxiliary courses BI-ZS10, BI-ZS20, BI-ZS30 are used used for the evidence and evaluation of the internship in IS KOS. Every 10 cr employment with a foreign institution. The maximum number of credits a student can earn for one internship is 30 credits. This amount can be di exceeds the academic year's dead-line. BI-ZS20 Bachelor internship abroad for 20 credits Each student can once within his / her bachelor's study programme have a foreign internship at a foreign university or other foreign scientific ar internship the Dean of the FIT, or the vice-dean for study affairs assesses the professional content. The student must provide evidence of the p internship. Auxiliary courses BI-ZS10, BI-ZS20, BI-ZS30 are used used for the evidence and evaluation of the internship in IS KOS. Every 10 cr employment with a foreign institution. The maximum number of credits a student can earn for one internship is 30 credits. This amount can be di exceeds the academic year's d	then address Fourier s as the wavelet transformes. Z,ZK Z,ZK Z d/or research institution rofessional content and edits correspond to 4 w vided into two subjects Z d/or research institution rofessional content and edits correspond to 4 w vided into two subjects Z d/or research institution rofessional content and edits correspond to 4 w vided into two subjects KZ aim of the course is to ion control, sensor rea	eries and their n. We examine 4 10 n. Before the d extent of the veeks of full-time if the internship 20 n. Before the d extent of the veeks of full-time if the internship 30 n. Before the d extent of the veeks of full-time if the internship 4 b teach students ding, application
BI-VMM Selected Mathematical Methods The lecture begins with an introduction to the analysis of complex functions of a complex variable. Next, we present the Lebesgue integral. We properties. Further, we introduce and study the properties of the Discrete Fourier Transform (DFT) and its fast implementation (FFT). We discus the linear programming problem in more detail and its solution using the Simplex algorithm. Each topic is demonstrated with interesting example NI-VYC Computability Classical theory of recursive functions and effective computability. Bl-ZS10 BI-ZS10 Bachelor internship abroad for 10 credits Each student can once within his / her bachelor's study affairs assesses the professional content. The student must provide evidence of the p internship. Auxiliary courses BI-ZS10, BI-ZS20, BI-ZS30 are used used for the evidence and evaluation of the internship in IS KOS. Every 10 cr employment with a foreign institution. The maximum number of credits a student can earn for one internship in S0 credits. This amount can be d exceeds the academic year's dead-line. BI-ZS20 Bachelor internship abroad for 20 credits Each student can once within his / her bachelor's study programme have a foreign internship at a foreign university or other foreign scientific ar internship ato cores BI-ZS10, BI-ZS20, BI-ZS30 are used used for the evidence and evaluation of the internship in IS KOS. Every 10 cr employment with a foreign institution. The maximum number of credits a student can earn for one internship in S KOS. Every 10 cr employment with a foreign institution. The maximum number of credits a student can earn for one internship in S KOS. Every 10 cr employment wit	then address Fourier s as the wavelet transformes. Z,ZK Z,ZK Z d/or research institution rofessional content and edits correspond to 4 w vided into two subjects Z d/or research institution rofessional content and edits correspond to 4 w vided into two subjects Z d/or research institution rofessional content and edits correspond to 4 w vided into two subjects KZ aim of the course is to ion control, sensor rea	eries and their n. We examine 4 10 n. Before the d extent of the veeks of full-time if the internship 20 n. Before the d extent of the veeks of full-time if the internship 30 n. Before the d extent of the veeks of full-time if the internship 4 b teach students ding, application
BI-VMM Selected Mathematical Methods The lecture begins with an introduce on to the analysis of complex functions of a complex variable. Next, we present the Lebesgue integral. We properties. Further, we introduce and study the properties of the Discrete Fourier Transform (DFT) and its fast implementation (FFT). We discuss the linear programming problem in more detail and its solution using the Simplex algorithm. Each topic is demonstrated with interesting example NI-VYC Computability Classical theory of recursive functions and effective computability. BI-ZS10 Bachelor internship abroad for 10 credits Each student can once within his / her bachelor's study programme have a foreign internship at a foreign university or other foreign scientific ar internship the Dean of the FIT, or the vice-dean for study affairs assesses the professional content. The student must provide evidence of the p internship. Auxiliary courses BI-ZS10, BI-ZS20, BI-ZS30 are used used for the evidence and evaluation of the internship in SKOS. Every 10 cr employment with a foreign institution. The maximum number of credits a student can earn for one internship is 30 credits. This amount can be diexceeds the academic year's dead-line. BI-ZS20 Bachelor internship abroad for 20 credits Each student can once within his / her bachelor's study programme have a foreign internship at a foreign university or other foreign scientific ar internship the Dean of the FIT, or the vice-dean for study affairs assesses the professional content. The student must provide evidence of the p internship. Auxiliary courses BI-ZS10, BI-ZS20, are used used for the evidence and evaluation of the internship in IS KOS. Every 10 cr employment with a foreign institution.	then address Fourier s as the wavelet transformes. Z,ZK Z,ZK Z d/or research institution rofessional content and edits correspond to 4 w vided into two subjects Z d/or research institution rofessional content and edits correspond to 4 w vided into two subjects Z d/or research institution rofessional content and edits correspond to 4 w vided into two subjects KZ aim of the course is to ion control, sensor real to get practical experi	eries and their n. We examine 4 10 n. Before the d extent of the veeks of full-time if the internship 20 n. Before the d extent of the veeks of full-time if the internship 30 n. Before the d extent of the veeks of full-time if the internship 4 b teach students ding, application ence with these
BI-VMM Selected Mathematical Methods The lecture begins with an introduction to the analysis of complex functions of a complex variable. Next, we present the Lebesgue integral. We properties. Further, we introduce and study the properties of the Discrete Fourier Transform (DFT) and its fast implementation (FFT). We discust the linear programming problem in more detail and its solution using the Simplex algorithm. Each topic is demonstrated with interesting example NI-VYC Computability Computability BI-ZS10 Bachelor internship abroad for 10 credits Each student can once within his / her bachelor's study programme have a foreign internship at a foreign university or other foreign scientific ar internship atocures BI-ZS10, BI-ZS20, BI-ZS30 are used used for the evidence and evaluation of the internship in 15 KOS. Every 10 cr employment with a foreign institution. The maximum number of credits a student can earn for one internship is 30 credits. This amount can be di exceeds the academic year's dead-line. BI-ZS20 Bachelor internship abroad for 20 credits Each student can once within his / her bachelor's study programme have a foreign internship at a foreign university or other foreign scientific ar internship the Dean of the FIT, or the vice-dean for study affairs assesses the professional content. The student must provide evidence of the printernship. Auxiliary courses BI-ZS10, BI-ZS20, BI-ZS30 are used used for the evidence and evaluation of the internship in 15 KOS. Every 10 cr employment with a foreign institution. The maximum number of credits a student can earn for one internship in 15 KOS. Every 10 cr employment with a foreign institution. The maximum onore or credits a student can earn for one internship i	then address Fourier s as the wavelet transformes. Z,ZK d/or research institution rofessional content and edits correspond to 4 w vided into two subjects Z d/or research institution rofessional content and edits correspond to 4 w vided into two subjects Z d/or research institution rofessional content and edits correspond to 4 w vided into two subjects Z d/or research institution rofessional content and edits correspond to 4 w vided into two subjects KZ at aim of the course is to it on control, sensor rea to get practical experi KZ	eries and their n. We examine 4 10 n. Before the d extent of the veeks of full-time is the internship 20 n. Before the d extent of the veeks of full-time is the internship 30 n. Before the d extent of the veeks of full-time is the internship 4 b teach students ding, application ence with these 4
BI-VMM Selected Mathematical Methods The lecture begins with an introduce on the analysis of complex functions of a complex variable. Next, we present the Lebesgue integral. We properties. Further, we introduce and study the properties of the Discrete Fourier Transform (DFT) and its fast implementation (FFT). We discus the linear programming problem in more detail and its solution using the Simplex algorithm. Each topic is demonstrated with interesting example NI-VYC Computability Computability BI-ZS10 Bachelor internship abroad for 10 credits Each student can once within his / her bachelor's study programme have a foreign internship at a foreign university or other foreign scientific ar internship ato courses BI-ZS10, BI-ZS20, BI-ZS20 are used used for the evidence and evaluation of the internship in 15 KOS. Every 10 cr employment with a foreign institution. The maximum number of credits a student can earn for one internship is 30 credits. This amount can be di exceeds the academic year's dead-line. BI-ZS20 Bachelor internship abroad for 20 credits Each student can once within his / her bachelor's study programme have a foreign internship at a foreign university or other foreign scientific ar internship the Dean of the FIT, or the vice-dean for study affairs assesses the professional content. The student must provide evidence of the printernship. Auxiliary courses BI-ZS10, BI-ZS20, BI-ZS30 are used used for the evidence and evaluation of the internship in 15 KOS. Every 10 cr employment with a foreign institution. The maximum number of credits a student can earn for one internship in 5 KOS. Every 10 cr employment with a foreign institution. The maximum number of credits a student can earn for one internship in	then address Fourier s as the wavelet transformes. Z,ZK Z,ZK Z d/or research institution rofessional content and edits correspond to 4 w vided into two subjects Z d/or research institution rofessional content and edits correspond to 4 w vided into two subjects Z d/or research institution rofessional content and edits correspond to 4 w vided into two subjects KZ aim of the course is to ion control, sensor rea to get practical experi KZ ples of process model	eries and their n. We examine 4 10 n. Before the d extent of the veeks of full-time if the internship 20 n. Before the d extent of the veeks of full-time if the internship 30 n. Before the d extent of the veeks of full-time if the internship 4 b teach students ding, application ence with these 4 ling and they will
BI-VMM Selected Mathematical Methods The lecture begins with an introduction to the analysis of complex functions of a complex variable. Next, we present the Lebesgue integral. We properties. Further, we introduce and study the properties of the Discrete Fourier Transform (DFT) and its fast implementation (FFT). We discust the linear programming problem in more detail and its solution using the Simplex algorithm. Each topic is demonstrated with interesting example NI-VYC Computability Cassical theory of recursive functions and effective computability. BI-ZS10 Bachelor internship abroad for 10 credits Each student can once within his / her bachelor's study programme have a foreign internship at a foreign university or other foreign scientific ar internship. Auxiliary courses BI-ZS10, BI-ZS20, BI-ZS30 are used used for the evidence and evaluation of the internship in 15 KOS. Every 10 cr employment with a foreign institution. The maximum number of credits a student can earn for one internship is 30 credits. This amount can be diveceeds the academic year's dead-line. BI-ZS20 Bachelor internship abroad for 20 credits Each student can once within his / her bachelor's study programme have a foreign internship at a foreign university or other foreign scientific ar internship the Dean of the FIT, or the vice-dean for study affairs assesses the professional content. The student must provide evidence of the p internship. Auxiliary courses BI-ZS10, BI-ZS20, BI-ZS30 are used used for the evidence and evaluation of the internship in 15 KOS. Every 10 cr employment with a foreign institution. The maximum number of credits a student can earn for one internship is 30 credits. This amount can be di exceeds the academic year's de	then address Fourier s as the wavelet transformes. Z,ZK Z,ZK Z ad/or research institution rofessional content and edits correspond to 4 w vided into two subjects Z ad/or research institution rofessional content and edits correspond to 4 w vided into two subjects Z ad/or research institution rofessional content and edits correspond to 4 w vided into two subjects KZ a aim of the course is to ion control, sensor real to get practical experi KZ ples of process modell g of business processor	eries and their n. We examine 4 10 n. Before the d extent of the veeks of full-time if the internship 20 n. Before the d extent of the veeks of full-time if the internship 30 n. Before the d extent of the veeks of full-time if the internship 4 b teach students ding, application ence with these 4 ling and they will es using modern
BI-VMM Selected Mathematical Methods The lecture begins with an introduction to the analysis of complex functions of a complex variable. Next, we present the Lebesgue integral. We properties, Further, we introduce and study the properties of the Discrete Fourier Transform (DFT) and its fast implementation (FFT). We discus the linear programming problem in more detail and its solution using the Simplex algorithm. Each topic is demonstrated with interesting example NI-VYC Computability Bachelor internship abroad for 10 credits Each student can once within his / her bachelor's study programme have a foreign internship at a foreign university or other foreign scientific ar internship the Dean of the FIT, or the vice-dean for study affairs assesses the professional content. The student must provide evidence of the printernship atter foreign institution. The maximum number of credits a student can earn for one internship in is 10 StOS. Every 10 cr BI-ZS20 Bachelor internship abroad for 20 credits Each student can once within his / her bachelor's study programme have a foreign internship at a foreign university or other foreign scientific ar internship the Dean of the FIT, or the vice-dean for study affairs assesses the professional content. The student must provide evidence of the printernship. Auxiliary courses BI-ZS10, BI-ZS20, BI-ZS2	then address Fourier s as the wavelet transformes. Z,ZK Z,ZK Z ad/or research institution rofessional content and edits correspond to 4 w vided into two subjects Z ad/or research institution rofessional content and edits correspond to 4 w vided into two subjects Z ad/or research institution rofessional content and edits correspond to 4 w vided into two subjects KZ a aim of the course is to ion control, sensor real to get practical experi KZ ples of process modell g of business processor	eries and their n. We examine 4 10 n. Before the d extent of the veeks of full-time if the internship 20 n. Before the d extent of the veeks of full-time if the internship 30 n. Before the d extent of the veeks of full-time if the internship 4 b teach students ding, application ence with these 4 ling and they will es using modern
BI-VMM Selected Mathematical Methods The lecture begins with an introduction to the analysis of complex functions of a complex variable. Next, we present the Lebesgue integral. We properties. Further, we introduce and study the properties of the Discrete Fourier Transform (DFT) and its fast implementation (FFT). We discuss the linear programming problem in more detail and its solution using the Simplex algorithm. Each topic is demonstrated with interesting example line roursive functions and effective computability. BI-ZS10 Bachelor internship abroad for 10 credits Each student can once within his / her bachelor's study programme have a foreign internship at a foreign university or other foreign scientific ar internship. Auxiliary courses BI-ZS10, BI-ZS30, BI-ZS30	then address Fourier s as the wavelet transformes. Z,ZK Z,ZK Z d/or research institution rofessional content and edits correspond to 4 w vided into two subjects Z d/or research institution rofessional content and edits correspond to 4 w vided into two subjects Z d/or research institution rofessional content and edits correspond to 4 w vided into two subjects KZ a aim of the course is to ion control, sensor rea to get practical experi KZ ples of process modell g of business process of information and busi	eries and their n. We examine 4 10 n. Before the d extent of the veeks of full-time if the internship 20 n. Before the d extent of the veeks of full-time if the internship 30 n. Before the d extent of the veeks of full-time if the internship 4 b teach students ding, application ence with these 4 ling and they will es using modern ness strategy of
BI-VMM Selected Mathematical Methods The lecture begins with an introduction to the analysis of complex functions of a complex variable. Next, we present the Lebesgue integral. We properties, Further, we introduce and study the properties of the Discrete Fourier Transform (DFT) and its fast implementation (FFT). We discus the linear programming problem in more detail and its solution using the Simplex algorithm. Each topic is demonstrated with interesting example NI-VYC Computability Bachelor internship abroad for 10 credits Each student can once within his / her bachelor's study programme have a foreign internship at a foreign university or other foreign scientific ar internship the Dean of the FIT, or the vice-dean for study affairs assesses the professional content. The student must provide evidence of the printernship atter foreign institution. The maximum number of credits a student can earn for one internship in is 10 StOS. Every 10 cr BI-ZS20 Bachelor internship abroad for 20 credits Each student can once within his / her bachelor's study programme have a foreign internship at a foreign university or other foreign scientific ar internship the Dean of the FIT, or the vice-dean for study affairs assesses the professional content. The student must provide evidence of the printernship. Auxiliary courses BI-ZS10, BI-ZS20, BI-ZS2	then address Fourier s as the wavelet transformes. Z,ZK Z,ZK Z ad/or research institution rofessional content and edits correspond to 4 w vided into two subjects Z ad/or research institution rofessional content and edits correspond to 4 w vided into two subjects Z ad/or research institution rofessional content and edits correspond to 4 w vided into two subjects KZ a aim of the course is to ion control, sensor real to get practical experi KZ ples of process modell g of business processor	eries and their n. We examine 4 10 n. Before the d extent of the veeks of full-time if the internship 20 n. Before the d extent of the veeks of full-time if the internship 30 n. Before the d extent of the veeks of full-time if the internship 4 b teach students ding, application ence with these 4 ling and they will es using modern
BI-VMM Selected Mathematical Methods The lecture begins with an introduction to the analysis of complex functions of a complex variable. Next, we present the Lebesgue integral. We properties - functions of a complex variable. Next, we present the Lebesgue integral. We discus the linear programming problem in more detail and its solution using the Simplex algorithm. Each topic is demonstrated with interesting example NI-VYC Classical theory of recursive functions and effective computability. BI-ZS10 Bachelor internship abroad for 10 credits Each student can once within his / her bachelor's study programme have a foreign internship at a foreign university or other foreign scientific ar internship the Dean of the FIT. or the vice-dean for study affairs assesses the professional content. The student must provide evidence of the p internship. Auxillary courses BI-ZS10, BI-ZS20, BI-ZS30 are used used for the evidence and evaluation of the internship in IS KOS. Every 10 cr employment with a foreign institution. The maximum number of credits a student can earn for one internship is 30 credits. This amount can be d exceeds the academic year's dead-line. BI-ZS20 Bachelor internship abroad for 20 credits Each student can once within his / her bachelor's study programme have a foreign internship at a foreign university or other foreign scientific ar internship. Auxillary courses BI-ZS10, BI-ZS20, BI-ZS30 are used used for the evidence and evaluation of the internship in IS KOS. Every 10 cr employment with a foreign institution. The maximum number of credits a student can earn for one internship is 30 credits. This amount can be d exceeds the cademic year's dead-line. BI-ZS30 Bachelor internship abroad for	then address Fourier s as the wavelet transformes. Z,ZK Z,ZK Z ad/or research institution rofessional content and edits correspond to 4 w vided into two subjects Z ad/or research institution rofessional content and edits correspond to 4 w vided into two subjects Z ad/or research institution rofessional content and edits correspond to 4 w vided into two subjects KZ a aim of the course is to ion control, sensor rea to get practical experi KZ ples of process modell g of business process of information and busi	eries and their n. We examine 4 10 n. Before the d extent of the veeks of full-time is if the internship 20 n. Before the d extent of the veeks of full-time if the internship 30 n. Before the d extent of the veeks of full-time is if the internship 4 b teach students ding, application ence with these 4 ing and they will es using modern ness strategy of 3
BI-VMM Selected Mathematical Methods The lecture begins with an introduction to the analysis of complex functions of a complex variable. Next, we present the Lebesgue integral. We properties - further, we introduce and study the properties of the Discrete Fourier Transform (DFT) and its fast implementation (FFT). We discus the linear programming problem in more detail and its solution using the Simplex algorithm. Each topic is demonstrated with interesting exampl NI-VYC Computability Classical theory of recursive functions and effective computability. BI-ZS10 Bachelor internship abroad for 10 credits Each student can once within his / her bachelor's study programme have a foreign internship. At foreign university or other foreign scientific ar internship the Dean of the FIT, or the vice-dean for study affairs assesses the professional content. The student must provide evidence of the primernship. Auxiliary courses BI-ZS10, BI-ZS20, BI-ZS20 are used used for the evidence and evaluation of the internship in IS KOS. Every 10 cr BI-ZS20 Bachelor internship abroad for 20 credits Each student can once within his / her bachelor's study programme have a foreign internship at a foreign university or other foreign scientific ar internship the Dean of the FIT, or the vice-dean to study affairs assesses the professional content. The student must provide evidence of the primetrankip. Auxiliary courses BI-ZS10, BI-ZS20, BI-ZS20 are used used to the evidence and evaluation of the internship in IS KOS. Every 10 cr BI-ZS20 Bachelor internship abroad for 30 credits Each student can once within his / her bachelor's study programme have a for	then address Fourier s as the wavelet transformes. Z,ZK Z,ZK Z ad/or research institution rofessional content and edits correspond to 4 w vided into two subjects Z ad/or research institution rofessional content and edits correspond to 4 w vided into two subjects Z ad/or research institution rofessional content and edits correspond to 4 w vided into two subjects KZ a aim of the course is to ion control, sensor rea to get practical experi KZ ples of process modell g of business process of information and busi	eries and their n. We examine 4 10 n. Before the d extent of the veeks of full-time is if the internship 20 n. Before the d extent of the veeks of full-time if the internship 30 n. Before the d extent of the veeks of full-time is if the internship 4 b teach students ding, application ence with these 4 ing and they will es using modern ness strategy of 3

BI-IOS	Fundamentals of iOS Application Development for iPhone and iPad	KZ	4			
This course is presente	This course is presented in Czech.					
BI-ZWU	Introduction to Web and User Interfaces	Z,ZK	4			
This course is presented in Czech.						
BI-3DT.1	3D Printing	KZ	4			

Code of the group: BI-UI-VO.21

Name of the group: Elective vocational Courses for a Bachelor Specialization BI-UI.21, version 2021 Requirement credits in the group: Requirement courses in the group:

Credits in the group: 0

Note on the group:

Code	Name of the course / Name of the group of courses (in case of groups of courses the list of codes of their members) Tutors, authors and guarantors (gar.)	Completion	Credits	Scope	Semester	Role
BI-ADU.21	Unix Administration Zden k Muziká, Petr Zemánek, Miroslav Prágl Zden k Muziká Zden k Muziká (Gar.)	Z,ZK	5	2P+2C	L	V
BI-AWD.21	Web and Database Server Administration Michal Valenta, Lukáš Ba inka Lukáš Ba inka Michal Valenta (Gar.)	Z,ZK	5	2P+2C	Z	V
BI-AG2.21	Algorithms and Graphs 2 Dušan Knop, Michal Opler, Ond ej Suchý, Tomáš Valla, Radek Hušek Ond ej Suchý Ond ej Suchý (Gar.)	Z,ZK	5	2P+2C	L	V
BI-ASB.21	Applied Network Security Yelena Trofimova, Ji í Dostál, Jakub Tetera, Michal Polák, Martin Šutovský, Martin Mandík Ji í Dostál Ji í Dostál (Gar.)	Z,ZK	5	2P+2C	z	V
BI-APS.21	Architectures of Computer Systems Michal Štepanovský, Pavel Tvrdík Michal Štepanovský Pavel Tvrdík (Gar.)	Z,ZK	5	2P+2C	Z	V
BI-BEK.21	Secure Code Josef Kokeš Josef Kokeš (Gar.)	Z,ZK	5	2P+2C	L	V
BI-BIG.21	DB Technologies for Big Data Monika Borkovcová Monika Borkovcová (Gar.)	KZ	5	2P+2C	Z,L	V
BI-EPP.21	Economic Business Processes David Buchtela David Buchtela Tomáš Evan (Gar.)	Z,ZK	5	2P+2C	L,Z	V
BI-EHA.21	Ethical Hacking Ji í Dostál, Martin Kolárik, Andrej Šimko Ji í Dostál Ji í Dostál (Gar.)	Z,ZK	5	2P+2C	L	V
BI-FBI.21	Financial Business Intelligence David Buchtela David Buchtela Petra Pavlí ková (Gar.)	Z,ZK	5	2P+2C	Z,L	V
BI-HWB.21	Hardware Security Jií Bu ek Jií Bu ek Jií Bu ek (Gar.)	Z,ZK	5	2P+2C	Z	V
BI-IOT.21	Internet of Things Viktor erný, Lenka Kosková T ísková Lenka Kosková T ísková Lenka Kosková T ísková (Gar.)	Z,ZK	5	2P+2C	Z	V
BI-JPO.21	Computer Units Pavel Kubalík Pavel Kubalík Pavel Kubalík (Gar.)	Z,ZK	5	2P+2C	Z	V
BI-KOM.21	Conceptual Modelling Robert Pergl, Marek B lohoubek Robert Pergl Robert Pergl (Gar.)	Z,ZK	5	2P+2C	Z	V
BI-LOG.21	Mathematical Logic Kate ina Trlifajová Kate ina Trlifajová Kate ina Trlifajová (Gar.)	Z,ZK	5	2P+2C	Z	V
BI-MPP.21	Methods of interfacing peripheral devices Miroslav Skrbek Miroslav Skrbek Miroslav Skrbek (Gar.)	Z,ZK	5	2P+2C	Z	V
BI-MDF.21	Modern Data Formats Petr Pauš Petr Pauš (Gar.)	KZ	3	1P+1C	Z	V
FIT-ITI	Modern IT infrastructure Ivan Šime ek	Z,ZK	5	2P+1C	Z,L	V
BI-MVT.21	Modern Visualisation Technologies Ji í Chludil, Petr Pauš Petr Pauš Petr Pauš (Gar.)	Z,ZK	5	2P+2C	Z	V
BI-MGA.21	Multimedia and Graphics Applications Ji í Chludil, Lukáš Ba inka, Jan Buriánek, Šimon Tan v Lukáš Ba inka Ji í Chludil (Gar.)	Z,ZK	5	2P+2C	Z	V
BI-OOP.21	Object-Oriented Programming Filip K ikava, Petr Máj, Filip íha Filip K ikava Filip K ikava (Gar.)	Z,ZK	5	2P+2C	Z	V
BI-PGR.21	Computer graphics programming Petr Felkel, Jaroslav Sloup Jaroslav Sloup Petr Felkel (Gar.)	Z,ZK	5	2P+2C	L	V
BI-PNO.21	Practical Digital Design Martin Novotný Martin Novotný Martin Novotný (Gar.)	KZ	5	2P+2C	Z	V
BI-PAI.21	Law and Informatics Zden k Ku era, Št pánka Havlíková, Dominik Vítek, Martin Samek, Ji í Maršál, Michal Mat jka Št pánka Havlíková Zden k Ku era (Gar.)	ZK	5	2P+2C	L	V
BI-PJP.21	Programming Languages and Compilers Jan Janoušek, Tomáš Pecka Jan Janoušek (Gar.)	Z,ZK	5	2P+1C	L	V

				,		
BI-PPA.21	Programming Paradigms Jan Janoušek, Tomáš Pecka, Petr Máj, Tomáš Jakl Jan Janoušek Jan Janoušek (Gar.)	Z,ZK	5	2P+2R	Z	v
BI-PGA.21	Programming of Graphic Applications Ji í Chludil, Radek Richtr Radek Richtr Radek Richtr (Gar.)	Z,ZK	5	2P+2C	Z	V
BI-PJS.21	JavaScript Programming Martin Kolárik, Nikita Mironov Monika Borkovcová Monika Borkovcová (Gar.)	KZ	5	3C	L	v
BI-PYT.21	Python Programming Martin Šlapák, Ji í Hanuš, Ond ej Bouchala, Mohamed Bettaz, Jan Šafa ík Martin Šlapák Martin Šlapák (Gar.)	KZ	5	3C	Z,L	v
BI-PRR.21	Project management David Pešek David Pešek Petra Pavlí ková (Gar.)	Z,ZK	5	2P+2C	Z,L	v
BI-SIP.21	Network Programming Jan Fesl Jan Fesl (Gar.)	Z	5	2P+2C	Z	V
BI-SWI.21	Software Engineering Michal Valenta, Ji í Mlejnek, Zden k Rybola Zden k Rybola Michal Valenta (Gar.)	Z,ZK	5	2P+1C	L	v
BI-SP1.21	Team Software Project 1 Michal Valenta, Ji í Chludil, Ji í Mlejnek, Ji í Hunka, Zden k Rybola, Ji í Borský, Jan Matoušek, Radek Richtr, Marek Suchánek, Zden k Rybola Ji í Mlejnek (Gar.)	KZ	5	2C	L	v
BI-SP2.21	Team Software Project 2 Stanislav Kuznetsov, Michal Valenta, Ji í Chludil, Ji í Mlejnek, Ji í Hunka, Zden k Rybola, Ji í Borský, Jan Matoušek, Radek Richtr, Ji í Mlejnek Ji í Mlejnek (Gar.)	ΚZ	5	2C	Z	V
BI-SPS.21	Administration of Computer Networks and Services Jan Kubr, Libor Dostálek Pavel Tvrdík Libor Dostálek (Gar.)	Z,ZK	5	2P+2S	Z	V
BI-SVZ.21	Machine vision and image processing Marcel Ji ina, Jakub Novák, David Kramný, Justýna Frommová Jakub Novák Marcel Ji ina (Gar.)	Z,ZK	5	2P+2C	L,Z	v
BI-SRC.21	Real-time systems Hana Kubátová, Ji í Vysko il Jaroslav Borecký Hana Kubátová (Gar.)	Z,ZK	5	2P+2C	Z	V
BI-TAB.21	Applications of Security in Technology Ji í Dostál, Jan B lohoubek, Martin Kolárik, Martin Pozd na Ji í Dostál Ji í Dostál (Gar.)	Z,ZK	5	2P+2C	L	v
BI-TJV.21	Java Technology Stanislav Kuznetsov, Jan Blizni enko, Ji í Dan ek, Raian Samerkhanov Stanislav Kuznetsov	Z,ZK	5	2P+2C	Z	v
BI-TPS.21	Computer Networks Technologies Vladimír Smotlacha, Josef Koumar Vladimír Smotlacha Vladimír Smotlacha (Gar.)	Z,ZK	5	2P+2S	Z	v
BI-TIS.21	Information Systems Pavel Náplava Pavel Náplava (Gar.)	Z,ZK	5	2P+2C	Z	V
BI-TUR.21	User Interface Design Jan Schmidt Jan Schmidt (Gar.)	Z,ZK	5	2P+2C	L	V
BI-TWA.21	Design of Web Applications David Bernhauer David Bernhauer (Gar.)	Z,ZK	5	2P+2C	Z	V
BI-IDO.21	Introduction to DevOps Michal Valenta, Ji í Mlejnek, Tornáš Vondra, Zden k Rybola Tomáš Vondra Ji í Mlejnek (Gar.)	Z,ZK	5	2P+2C	Z	v
BI-UKB.21	Introduction to Cybersecurity Ivana Trummová, Jan B lohoubek, David Pokorný, Jakub Tetera, František Ková, Martin Mandík, Tomáš Lu ák David Pokorný Jan B lohoubek (Gar.)	Z,ZK	5	3P+1C	Z	v
BI-VES.21	Embedded Systems Miroslav Skrbek Miroslav Skrbek (Gar.)	Z,ZK	5	2P+2C	L	V
BI-VDC.21	Virtualization and Data Centers Ji í Kašpar Ji í Kašpar Ji í Kašpar (Gar.)	Z,ZK	5	2P+2C	L	V
BI-VPS.21	Selected Topics in Computer Networking Alexandru Moucha, Mohamed Bettaz Pavel Tvrdík Mohamed Bettaz (Gar.)	Z,ZK	5	2P+2C	L	V
BI-VWM.21	Searching the Web and Multimedia Databases Ji í Novák, Tomáš Skopal Ji í Novák Tomáš Skopal (Gar.)	Z,ZK	5	2P+1C	L	V
BI-FEM.21	Fundamentals of Economics Tomáš Evan Tomáš Evan Tomáš Evan (Gar.)	Z,ZK	5	2P+2C	Z	V
BI-ZRS.21	Basics of System Control Kate ina Hyniová Kate ina Hyniová Kate ina Hyniová (Gar.)	Z,ZK	5	2P+2C	Z	v
BI-ZSB.21	Basics of System Security Marián Svetlík, Martin Šutovský, Dominik Novák, Ladislav Marko Simona Forn sek Simona Forn sek (Gar.)	Z,ZK	5	2P+2C	Z	v

Characteristics of the courses of this group of Study Plan: Code=BI-UI-VO.21 Name=Elective vocational Courses for a Bachelor Specialization BI-UI.21, version 2021

 BI-PYT.21
 Python Programming
 KZ
 5

 The aim of the course is to get acquainted with basic efficient control and data structures of the Python programming language for text and binary data processing. The differences between philosophy of programming in Python and in other programming languages will be explained. Each topic is prepared for students in the format of a Jupyter notebook, which enables greater accent to individual student work. Before each lab, students pass a short test on the last week topic. Four homeworks plus a semester work will be assigned during the semester.

	1	Υ
BI-BIG.21 DB Technologies for Big Data	KZ	5
Students will be introduced into the field of Big Data processing where nonrelational (NoSQL) database engines are typically used today. The course		
finishing the course students were able to choose suitable tools (mostly open source) and techniques, design and implement a simplest reproducible		0 (
collection, transformation/aggregation, presentation). Students get acquainted with various architectures for processing and storing big data. A theory	retical foundation	and presentation
of individual technologies will be supplemented with specific examples from practice.		
BI-SVZ.21 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 evaluat	-	
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 sy	stems for solving
problems of practice that the graduates may encounter.	7 71/	_
BI-VWM.21 Searching the Web and Multimedia Databases	Z,ZK	5
Students get basic overview about search techniques in the web environment that is interpreted as a very large distributed and heterogeneous store	-	-
students acquire information about search techniques in text and hypertext documents (the web pages themselves) and about feature extraction fro		
knowledge of similarity search in multimedia databases (generally in collections of unstructured data). They also learn techniques for programming well data types (documents).	o search engines i	or the mentioned
	Z,ZK	5
	1	-
The course is focused on methods for interfacing of peripheral devices. Interfacing of real peripheral devices is focused on techniques based on Univ includes both PC side and peripheral devices side. Labs are practically oriented. Students gain experience with implementation of relevant parts of		-
drivers, simple application development, and APIs of selected devices.		
BI-MVT.21 Modern Visualisation Technologies	Z,ZK	5
The goal of the course is to give an overview of modern visualization technologies and their principles, namely technologies related to virtual and au		-
high resolution displays (e.g., SAGE and video mapping) and their applications in practice. Several lectures deal with the content creation for the meni	•	
and procedural visualization, scientific data visualization, and 3D model scanning.	lioned teennologie	s, namely naetai
BI-ADU.21 Unix Administration	Z,ZK	5
Students will learn the internal structure of the UNIX operating system, with the administration of its basic subsystems and with the security principles. T	1 '	-
between user and administrator roles. They will get theoretical and practical knowledge of user management and administration, of users access rig	-	
processes, memory, network services and remote access, and in the areas of system deployment and virtualization. In the labs, they will verify the l	-	-
specific examples from practice.	anomougo nom a	
BI-AWD.21 Web and Database Server Administration	Z,ZK	5
Students will get acquainted with the administration of database and web servers and services. They will be able to install, configure, operate, test, a	1 '	1
web service systems. The principles will be demonstrated on the PostgreSQL relational database engine and Apache will be used as an example of		
BI-AG2.21 Algorithms and Graphs 2	Z,ZK	5
This course, presented in Czech, introduces basic algorithms and concepts of graph theory as a follow=up on the introduction given in the compulse	1 '	-
delves into advances data structures and amortized complexity analysis. It also includes a very light introduction to approximation algorithms. For El	-	
BIE-AG2.21.	inglient tereforen er t	
BI-ASB.21 Applied Network Security	Z,ZK	5
The aim of the course is to introduce selected topics from computer networks in terms of cybersecurity. These topics extend the basic knowledge ga	1	-
security applications like the public key infrastructure, encrypted network protocols, link and network layer security or wireless networks. After finishi		
knowledge of security applications in computer networks.	5	3.
BI-APS.21 Architectures of Computer Systems	Z,ZK	5
Students will learn the construction principles of internal architecture of computers with universal processors at the level of machine instructions. Sp	1 '	-
pipelined instruction processing and on the memory hierarchy. Students will understand the basic concepts of RISC and CISC architectures and the		
not only in scalar processors, but also in superscalar processors that can execute multiple instructions in one cycle, while ensuring the correctness	of the sequential i	model of the
program. The course further elaborates the principles and architectures of shared memory multiprocessor and multicore systems and the memory or	oherence and cor	nsistency in such
systems.		
BI-BEK.21 Secure Code	Z,ZK	5
The students will learn how to assess security risks and how to take them into account in the design phase of their own code and solutions. After gettii	ng familiar with the	threat modeling
theory, students gain practical experience with running programs with reduced privileges and methods of specifying these privileges, since not ever	y program needs	to run with
administrator privileges. Dangers inherent in buffer overflows will be practically demonstrated. Students will be introduced to the principles of securin	ng data and the re	lationships of
security and database systems, web, remote procedure calls, and sockets in general. The module concludes with Denial of Service attacks and the	defense against t	hem.
BI-EPP.21 Economic Business Processes	Z,ZK	5
The aim of the course is to present typical processes related to the usual life cycle of a company. The course focuses mainly on the basic economic	and financial asp	ects of business
in the market environment of the Czech Republic and the basics of management. In the course, students are acquainted with the typical phases of t	the company's life	cycle, from the
establishment of the company, through the management of property and capital structure, financing of the company, determining the cost function o	f the company an	d labor costs, to
evaluating the financial health of the company and its eventual rehabilitation or termination.		
BI-EHA.21 Ethical Hacking	Z,ZK	5
The goal of the course is to introduce students to the field of penetration testing and ethical hacking. The course deals with cybersecurity threats, vu	Inerabilities, and	their possible
exploitation in computer networks, web applications, wireless networks, operating systems, and others like the Internet of Things or cloud. The focus	s is on hands-on e	experience with
vulnerabilities testing and the following process of penetration test documentation.		
BI-FBI.21 Financial Business Intelligence	Z,ZK	5
The aim of the course is to acquaint students primarily with financial accounting as a tool for recording business operations and documents for busin	-	-
and other indicators for comparison with other companies and management decision process at the tactical and strategic level. The second view is	-	-
for financial management and prediction of business development. Management accounting allows monitoring of the financial status and performance		
accounting periods, enables a multidimensional view of business data, enables to control effectively factors affecting the return on invested capital a		
assess options related to future business decisions. The principles of management accounting, described in this course, are the basis of Business I	nteiligence modul	es in business
information systems, decision support systems, and other knowledge-oriented systems.		-
BI-HWB.21 Hardware Security	Z,ZK	5
The course deals with hardware resources used to ensure security of computer systems including embedded ones. Students become familiar with the o		
modules, security features of modern processors, and storage media protection through encryption. They will gain knowledge about vulnerabilities of HV		-
attacks and tampering with hardware during manufacture. Students will have an overview of contact and contactless smart card technology includin for multi-factor authentication (biometrics). Students will understand methods of efficient implementations of ciphers.	y applications and	a related topics

BI-IOT.21	Internet of Things	Z,ZK	5
	n overview of technologies and development tools used in the field of the Internet of Things (IoT). Lectures are devoted to an other sectors are devoted to an	overview of senso	rs and actuators,
	technologies designed primarily for this area, and appropriate programming methods. They include an overview of IoT archi		
	er labs, students will gain practical experience with developing simple IoT systems using common development environmer	nts (hardware - AF	RM, ESP, STM;
software - Arduino, Rasp			
	Computer Units	Z,ZK	5
-	asic knowledge of digital computer units acquired in the obligatory course of the program (BIE-SAP), get acquainted in deta units and processors and their interactions with the environment, including accelerating arithmetic-logic units and using app		
	anization of main memory and other internal memories (addressable, LIFO, FIFO and CAM) will be discussed in detail, inclu	-	-
	d serial data transmissions. They will also get acquainted with the methodology of controller design, with the principles of co	•	
	architecture of the bus system. The problems will be practically evaluated in the labs and with the help of the educational micro		-
and programmable hardv	vare design kits (FPGA).		
BI-KOM.21	Conceptual Modelling	Z,ZK	5
The course is focused or	n developing abstract thinking and precise formulation skills using conceptual models. Students learn skills of discerning key	terms in a doma	in, the ability to
	prrect relations in complex systems of social reality, mostly enterprises and institutions. Students learn basics of ontological significant structures and structure of the str	-	
	how to express business rules and constraints using the OCL language and foundations of OWL/RDF semantic data repres		
	enterprise engineering, being a discipline for conceptual modelling of enterprises and institutes and their processes. The DEM		BPMN notation
-	e is designed with the respect to continuation in software implementations. Recommended optional follow-up course: BI-ZPI	Z,ZK	5
	Mathematical Logic ne basics of propositional and predicate logic. It starts from the semantic point of view. Based on the notion of truth, satisfial		-
	provide a set of propositional and predicate logic. It starts from the semantic point of view. Dased of the holdon of uturi, satisfiability of formulas, some of which are used for automated proving, a		
	lean functions in propositional logic. In predicate logic, the course further deals with formal theories, such as arithmetics, an	-	
	al logic is demonstrated on the axiomatic system of propositional logic and its properties. Gödel's incompleteness theorems		
BI-MDF.21	Modern Data Formats	KZ	3
The goal of the course is	to give an overview of commonly used data formats for typical types of data. There will be a description of each data type a	and the data forma	ats used for that
data type along with tools	s available to work with such data. After finishing the course, the students should know how to work with common data, e.g.	on the Web.	
FIT-ITI	Modern IT infrastructure	Z,ZK	5
-	ne-invariable range of software or hardware, this subject tries to explain the issue as a whole and in the context of the time. A		
	complex whole, the individual parts of which must be reconciled from different aspects of the view using current technologie	es. The proposed s	solution should
	nuous and economically optimal operation.		
	Multimedia and Graphics Applications	Z,ZK	5
	with multimedia technologies and applications for 2D/3D bitmap and vector graphics. During the course, current tools for we vill be introduced. Students learn several basic techniques of creation and editing content in computer graphics, introduction to		
	to use multimedia transmission and representation systems, including real-time multimedia processing. They understand the		-
	ards. They gain a number of practical skills, such as vectorizing raster images, retouching photos, or creating 3D models.		
	Object-Oriented Programming	Z,ZK	5
	ming has been used in the last 50 years to solve computational problems by using graphs of objects that collaborate togeth		-
course students get acqu	ainted with the main principles of object-oriented programming and design, used in modern programming languages. The en	mphasis is on prac	ctical techniques
for developing software, v	which includes testing, error handing, refactoring, and application of design pattern.		
BI-PGR.21	Computer graphics programming	Z,ZK	5
-	e, students can program a simple interactive 3D graphical application like a computer game or scientific visualization, design		-
-	terials (like wall surface, wood, sky), and set up the lighting. At the same time, they understand the fundamental principles and		
	e, geometric transformations, or lighting model. They gain knowledge allowing orientation in computer graphics and represe t, e.g., GPU programming and animations. They get used to techniques utilized in geometric modeling, modeling curves and su	-	-
	r, e.g., Groppogramming and animations. They get used to techniques dunized in geometric modeling, modeling curves and sc Practical Digital Design	KZ	5
	v of the contemporary digital design flow and learn practical skills to use synchronous design techniques. They understand t	1 1	-
s a	nologies FPGA and ASIC. Students demonstrate practical use of the design techniques in the course project using modern		0 0
tools.		, ,	5
BI-PAI.21	Law and Informatics	ZK	5
	to introduce students into the basic legal instruments that they will encounter in their practice. Students will gain knowledge		s in the Czech
Republic and will be aler	ted to the pitfalls that await them in business from the point of view of law. They will understand the process of concluding of	ontracts in real an	d Internet
	neir responsibilities in working with the Internet, will be familiar with the institutes of intellectual property law, and will be able		
	s. Emphasis will also be put on the legal protection of data on the Internet, the registration of Internet domains and protection	-	
	ch behaviour in the field of IT that can be classified as criminal under the Czech law. The course will also include analyses of		
	Programming Languages and Compilers		5 They learn to
	npiling methods of programming languages. They are introduced to intermediate representations used in current compilers of a translation of a text that conforms a given syntax, to a target code and also to create a compiler based on the specification		
-	uage but any text in a language generated by a given LL input grammar.		
	Programming Paradigms	Z,ZK	5
	isic paradigms of high-level programming languages, including their basic execution models, benefits, and disadvantages of		
	and its basic principles are explained in details. Logic programming is introduced as another way of declarative programming		
on lambda calculus and	on Lisp (Racket) and Prolog programming languages. Moreover, usage of these principles is demonstrated on modern mair	nstream programm	ning languages
such as C++ and Java.			
	Programming of Graphic Applications	Z,ZK	5
	ne possibilities of current professional open-source tools for image editing, video editing, 3D animation (GIMP, Blender) and the		
	natical data). Emphasis will be placed on the possibilities of further enhancement of the presented software tools, both usin	ig built-in scripting	languages and
by implementation of plug			-
	JavaScript Programming tion to lavascript programming. Students will also learn best practices and get acquainted with teals that make code develo		5
	ction to Javascript programming. Students will also learn best practices and get acquai nted with tools that make code devel	opinent in JavaSC	າ ມານ ເອດລາຍາ.

BI-PRR.21 Project management	Z,ZK	5
The aim of the course is to introduce students into the basic concepts and principles of project management, i.e. methods of planning, teamwork, ar	I ' I	-
project, communication, argumentation and meeting management. Students will practice project management techniques (e.g. SWOT analysis, risk	assessment and i	management,
Gantt charts, resource schedule, resource balancing, network graphs) and creation of project documentation. The course is designed especially for	students who are	interested in
deepening their knowledge outside IT, consider starting their own company, or have ambitions to work in middle or senior management positions in	large companies.	The course is
also suitable for all those who will develop software or hardware in the form of team projects.		
BI-SIP.21 Network Programming	Z	5
The course covers fundamental topics of programming network applications. It consists of 4 parts. The introductory part is focused on low-level prog		
second part is devoted to designing communication protocols and their verification. The third part introduces the principles and applications of middl	•	
introduces basic modern models of distributed computing - P2P and blockchain. All topics will be first explained theoretically and then practices in co	omputer labs using	g a chosen
programming language environment.	774	
BI-SWI.21 Software Engineering	Z,ZK	5
Students get acquainted with methods of analysis and design of larger software projects that are typically designed and implemented in teams. They		
their knowledge during the analysis and design of larger software systems that will be developed in the concurrent course BIE-SP1. Students get han using the visual language UML for modeling and solving software problems. Students learn the basics of object-oriented analysis, architecture design	-	
students also gain a theoretical basis in the field of project management, estimation of costs of software projects, and methods of their development		min the course,
BI-SP1.21 Team Software Project 1	KZ	5
Students gain hands-on experience with the analysis, design, and prototyping of a large-scale software system. Theoretical support is provided in the	I I	
concurrently and that teaches students necessary techniques and principles. Teams consisting of 4-6 students will work on a specific project. The te		
project leader, regularly consults with the team (at the seminars) both the formal and material aspects of the software design. The resulting software		
and finished in the BIE-SP2 course.		
BI-SP2.21 Team Software Project 2	KZ	5
Students gain hands-on experience with the iterative development process while working on a large-scale software project. The first iteration is the re-	sult of the BIE-SP	1 course project.
However, in this follow-up, the functionality, testing, and documentation of the software system being developed will be emphasized. Students will we		
teacher, in the role of the team and project leader, regularly consults with the team (at the seminars) the formal as well as material aspects of their s	olution.	
BI-SPS.21 Administration of Computer Networks and Services	Z,ZK	5
The aim of the course is to deepen the theoretical knowledge of network technologies and protocols in the environment of network servers administ	I ' I	erating systems
Linux and Windows. The course syllabus requires the knowledge at the level of courses BIE-PSI, BIE-VPS, and BIE-OSY. Practical skills will be gained	d by practical hand	s-on experience
with real network infrastructure.		
BI-SRC.21 Real-time systems	Z,ZK	5
Students obtain the basic knowledge in the real-time (RT) system theory and in the design methods for RT systems including the dependability issu	es. Theoretical kn	owledge from
lectures will be experimentally verified in computer labs. The course is mainly focused on embedded RT systems, therefore the design kits in the lab	are the same as	in the BIE-VES
course.		
BI-TAB.21 Applications of Security in Technology	Z,ZK	5
The goal of the course is to introduce students to selected topics from cybersecurity technical applications that are utilized in different industries. Stu	idents get a broad	ler overview of
cybersecurity applications and extend their knowledge from the cryptology, the secure code, and system, network, and hardware security.		
cybersecurity applications and extend their knowledge from the cryptology, the secure code, and system, network, and hardware security. BI-TJV.21 Java Technology	Z,ZK	5
BI-TJV.21 Java Technology The goal is to provide knowledge and skills for developing information systems and applications through concepts used in software development and	I ' I	
BI-TJV.21 Java Technology The goal is to provide knowledge and skills for developing information systems and applications through concepts used in software development and from Java language ecosystem. At the course end, the students are able to develop software systems in Java platform.	experience with lil	
BI-TJV.21 Java Technology The goal is to provide knowledge and skills for developing information systems and applications through concepts used in software development and from Java language ecosystem. At the course end, the students are able to develop software systems in Java platform. BI-TPS.21 Computer Networks Technologies	experience with lit	praries and tools
BI-TJV.21 Java Technology The goal is to provide knowledge and skills for developing information systems and applications through concepts used in software development and from Java language ecosystem. At the course end, the students are able to develop software systems in Java platform. BI-TPS.21 Computer Networks Technologies The course introduces students with basic and advanced technologies, components, and interfaces of contemporary computer networks at the physical students are the physical students and the physical students with basic and advanced technologies, components, and interfaces of contemporary computer networks at the physical students are students are able to develop the physical students are able to develop the physica	experience with lit	5 overlap to the
BI-TJV.21 Java Technology The goal is to provide knowledge and skills for developing information systems and applications through concepts used in software development and from Java language ecosystem. At the course end, the students are able to develop software systems in Java platform. BI-TPS.21 Computer Networks Technologies The course introduces students with basic and advanced technologies, components, and interfaces of contemporary computer networks at the physicink layer. The lectures provide theoretical foundations of these technologies and explain relevant physical principles. In the labs, the respective technologies	experience with lik Z,ZK sical layer with the nologies will be de	5 overlap to the emonstrated and
BI-TJV.21 Java Technology The goal is to provide knowledge and skills for developing information systems and applications through concepts used in software development and from Java language ecosystem. At the course end, the students are able to develop software systems in Java platform. BI-TPS.21 Computer Networks Technologies The course introduces students with basic and advanced technologies, components, and interfaces of contemporary computer networks at the physic link layer. The lectures provide theoretical foundations of these technologies and explain relevant physical principles. In the labs, the respective technologies with the most important ones students will get hands-on experience. Thematically, the course covers both local and long-range optical networks, Etherapy	experience with lik Z,ZK sical layer with the nologies will be de	5 overlap to the emonstrated and
BI-TJV.21 Java Technology The goal is to provide knowledge and skills for developing information systems and applications through concepts used in software development and from Java language ecosystem. At the course end, the students are able to develop software systems in Java platform. BI-TPS.21 Computer Networks Technologies The course introduces students with basic and advanced technologies, components, and interfaces of contemporary computer networks at the physlink layer. The lectures provide theoretical foundations of these technologies and explain relevant physical principles. In the labs, the respective techn with the most important ones students will get hands-on experience. Thematically, the course covers both local and long-range optical networks, Etr always with focus on high-speed networks.	experience with li Z,ZK sical layer with the nologies will be de thernet, modern with	5 overlap to the monstrated and reless networks,
BI-TJV.21 Java Technology The goal is to provide knowledge and skills for developing information systems and applications through concepts used in software development and from Java language ecosystem. At the course end, the students are able to develop software systems in Java platform. BI-TPS.21 Computer Networks Technologies The course introduces students with basic and advanced technologies, components, and interfaces of contemporary computer networks at the physlink layer. The lectures provide theoretical foundations of these technologies and explain relevant physical principles. In the labs, the respective techn with the most important ones students will get hands-on experience. Thematically, the course covers both local and long-range optical networks, Etr always with focus on high-speed networks. BI-TIS.21 Information Systems	experience with lit Z,ZK sical layer with the nologies will be de ternet, modern with Z,ZK	5 overlap to the monstrated and reless networks, 5
BI-TJV.21 Java Technology The goal is to provide knowledge and skills for developing information systems and applications through concepts used in software development and from Java language ecosystem. At the course end, the students are able to develop software systems in Java platform. BI-TPS.21 Computer Networks Technologies The course introduces students with basic and advanced technologies, components, and interfaces of contemporary computer networks at the physink layer. The lectures provide theoretical foundations of these technologies and explain relevant physical principles. In the labs, the respective technic with the most important ones students will get hands-on experience. Thematically, the course covers both local and long-range optical networks, Ethalways with focus on high-speed networks. BI-TIS.21 Information Systems The goal of this course is to familiarise students with the information systems topic and information systems implementation principles. During the course is to familiarise students with the information systems topic and information systems implementation principles. During the course is to familiarise students with the information systems topic and information systems implementation principles. During the course is to familiarise students with the information systems topic and information systems implementation principles. During the course is to familiarise students with the information systems topic and information systems implementation principles. During the course is to familiarise students with the information systems topic and information systems implementation principles. During the course is to familiarise students with the information systems topic and information systems implementation principles.	experience with lit Z,ZK sical layer with the nologies will be de hernet, modern with Z,ZK ourse, students ar	5 overlap to the emonstrated and reless networks, 5 e introduced to
BI-TJV.21 Java Technology The goal is to provide knowledge and skills for developing information systems and applications through concepts used in software development and from Java language ecosystem. At the course end, the students are able to develop software systems in Java platform. BI-TPS.21 Computer Networks Technologies The course introduces students with basic and advanced technologies, components, and interfaces of contemporary computer networks at the physink layer. The lectures provide theoretical foundations of these technologies and explain relevant physical principles. In the labs, the respective technic with the most important ones students will get hands-on experience. Thematically, the course covers both local and long-range optical networks, Ethalways with focus on high-speed networks. BI-TIS.21 Information Systems The goal of this course is to familiarise students with the information systems topic and information systems implementation principles. During the course of the call students are familiarised with the CRM, ERP, MRP and other is a students and their usage in specific industry segments. Students are familiarised with the CRM, ERP, MRP and other is a students and their usage in specific industry segments. Students are familiarised with the CRM, ERP, MRP and other is a students are familiarised with the CRM, ERP, MRP and other is a students are familiarised with the CRM, ERP, MRP and other is a students are familiarised with the CRM, ERP, MRP and other is a students are familiarised with the CRM, ERP, MRP and other is a students are familiarised with the CRM, ERP, MRP and other is a students are familiarised with the CRM, ERP, MRP and other is a students are familiarised with the CRM, ERP, MRP and the is a student of the courte is a student of	experience with lit Z,ZK sical layer with the nologies will be de hernet, modern win Z,ZK ourse, students ar er types of informa	5 overlap to the emonstrated and reless networks, 5 e introduced to ation systems.
BI-TJV.21 Java Technology The goal is to provide knowledge and skills for developing information systems and applications through concepts used in software development and from Java language ecosystem. At the course end, the students are able to develop software systems in Java platform. BI-TPS.21 Computer Networks Technologies The course introduces students with basic and advanced technologies, components, and interfaces of contemporary computer networks at the physink layer. The lectures provide theoretical foundations of these technologies and explain relevant physical principles. In the labs, the respective technic with the most important ones students will get hands-on experience. Thematically, the course covers both local and long-range optical networks, Ethalways with focus on high-speed networks. BI-TIS.21 Information Systems The goal of this course is to familiarise students with the information systems topic and information systems implementation principles. During the course is to familiarise students with the information systems topic and information systems implementation principles. During the course is the introduction to key ideas of an information system selection, evaluation of information system benefits, was	experience with lit Z,ZK sical layer with the nologies will be de ternet, modern with Z,ZK ourse, students ar er types of information s	5 overlap to the emonstrated and reless networks, 5 e introduced to ation systems. systems
BI-TJV.21 Java Technology The goal is to provide knowledge and skills for developing information systems and applications through concepts used in software development and from Java language ecosystem. At the course end, the students are able to develop software systems in Java platform. BI-TPS.21 Computer Networks Technologies The course introduces students with basic and advanced technologies, components, and interfaces of contemporary computer networks at the physink layer. The lectures provide theoretical foundations of these technologies and explain relevant physical principles. In the labs, the respective technic with the most important ones students will get hands-on experience. Thematically, the course covers both local and long-range optical networks, Ethalways with focus on high-speed networks. BI-TIS.21 Information Systems The goal of this course is to familiarise students with the information systems topic and information systems implementation principles. During the course is to familiarise students with the information systems topic and information systems implementation principles. During the course is the introduction to key ideas of an information system selection, evaluation of information system benefits, wai implementation and information system implementation based on the project management principles. The emphasis is on the initial customer analysis	experience with lit Z,ZK sical layer with the nologies will be de ternet, modern with Z,ZK ourse, students ar er types of information sis, customer insig	5 overlap to the emonstrated and reless networks, 5 e introduced to ation systems. systems ht and ability to
BI-TJV.21 Java Technology The goal is to provide knowledge and skills for developing information systems and applications through concepts used in software development and from Java language ecosystem. At the course end, the students are able to develop software systems in Java platform. BI-TPS.21 Computer Networks Technologies The course introduces students with basic and advanced technologies, components, and interfaces of contemporary computer networks at the physink layer. The lectures provide theoretical foundations of these technologies and explain relevant physical principles. In the labs, the respective technologies with focus on high-speed networks. BI-TIS.21 Information Systems The goal of this course is to familiarise students with the information systems topic and information systems implementation principles. During the course is to familiarise students with the information systems topic and information systems implementation principles. During the course is to familiarise students with the information systems topic and information systems implementation principles. During the course is to familiarise students with the information systems topic and information systems implementation principles. During the course is the fundamental part of the course is the introduction to key ideas of an information system selection, evaluation of information system benefits, wai implementation and information system implementation based on the project management principles. The emphasis is on the initial customer analys decide whether it is better to implement any existing information system or to develop a new one from scratch. These factors determine the information	experience with like Z,ZK sical layer with the nologies will be de nernet, modern with Z,ZK ourse, students ar er types of information s sis, customer insig n system impleme	5 overlap to the emonstrated and reless networks, 5 e introduced to ation systems. systems ht and ability to ntation success.
BI-TJV.21 Java Technology The goal is to provide knowledge and skills for developing information systems and applications through concepts used in software development and from Java language ecosystem. At the course end, the students are able to develop software systems in Java platform. BI-TPS.21 Computer Networks Technologies The course introduces students with basic and advanced technologies, components, and interfaces of contemporary computer networks at the physink layer. The lectures provide theoretical foundations of these technologies and explain relevant physical principles. In the labs, the respective technic with the most important ones students will get hands-on experience. Thematically, the course covers both local and long-range optical networks, Ethalways with focus on high-speed networks. BI-TIS.21 Information Systems The goal of this course is to familiarise students with the information systems topic and information systems implementation principles. During the crime function and information system and their usage in specific industry segments. Students are familiarised with the CRM, ERP, MRP and oth The fundamental part of the course is the introduction to key ideas of an information system selection, evaluation of information system benefits, wai implementation and information system implementation based on the project management principles. The emphasis is on the initial customer analys decide whether it is better to implement any existing information system or to develop a new one from scratch. These factors determine the information systems to the end of the course information systems security, operation, support, maintenance, legislation impacts, and government information systems to the secure information systems is constructin formation systems	experience with like Z,ZK sical layer with the nologies will be de- nernet, modern with Z,ZK ourse, students ar er types of information s sis, customer insig n system impleme pics are discussed	5 overlap to the emonstrated and reless networks, 5 e introduced to ation systems. systems ht and ability to ntation success. d.
BI-TJV.21 Java Technology The goal is to provide knowledge and skills for developing information systems and applications through concepts used in software development and from Java language ecosystem. At the course end, the students are able to develop software systems in Java platform. BI-TPS.21 Computer Networks Technologies The course introduces students with basic and advanced technologies, components, and interfaces of contemporary computer networks at the physilink layer. The lectures provide theoretical foundations of these technologies and explain relevant physical principles. In the labs, the respective techn with the most important ones students will get hands-on experience. Thematically, the course covers both local and long-range optical networks, Eth always with focus on high-speed networks. BI-TIS.21 Information Systems The goal of this course is to familiarise students with the information systems topic and information systems implementation principles. During the course is the introduction to key ideas of an information system selection, evaluation of information system benefits, waa implementation and information system implementation based on the project management principles. The emphasis is on the initial customer analys decide whether it is better to implement any existing information system or to develop a new one from scratch. These factors determine the information systems to develop a new one from scratch. These factors determine the information systems to develop a new one from scratch. These factors determine the information systems to develop a new one from scratch. These factors determine the information systems to develop a new one from scratch. These factors determine the information systems to develop a new one from scratch. Thes	experience with like Z,ZK sical layer with the nologies will be de- hernet, modern with Z,ZK ourse, students ar- er types of information s sis, customer insig n system impleme pics are discussed Z,ZK	5 overlap to the monstrated and reless networks, 5 e introduced to ation systems. systems ht and ability to ntation success. d. 5
BI-TJV.21 Java Technology The goal is to provide knowledge and skills for developing information systems and applications through concepts used in software development and from Java language ecosystem. At the course end, the students are able to develop software systems in Java platform. BI-TPS.21 Computer Networks Technologies The course introduces students with basic and advanced technologies, components, and interfaces of contemporary computer networks at the physe link layer. The lectures provide theoretical foundations of these technologies and explain relevant physical principles. In the labs, the respective techn with the most important ones students will get hands-on experience. Thematically, the course covers both local and long-range optical networks, Eth always with focus on high-speed networks. BI-TIS.21 Information Systems The goal of this course is to familiarise students with the information systems topic and information systems implementation principles. During the course is to familiarise students with the information system stopic and information systems implementation principles. During the course is to familiarise students with the information systems topic and information system simplementation principles. During the course is to familiarise students on the project management principles. The emphasis is on the initial customer analyse decide whether it is better to implement any existing information system or to develop a new one from scratch. These factors determine the information systems to EI-TUR.21 User Interface Design Students gain a basic overview of methods for designing and testing common user interfaces. They get experience to solve the problems where softhermatice specifies ove	experience with like Z,ZK sical layer with the nologies will be de- hernet, modern with Z,ZK ourse, students ar- er types of information s sis, customer insig n system impleme pics are discussed Z,ZK ware and other pr	5 overlap to the emonstrated and reless networks, 5 e introduced to ation systems. systems ht and ability to ntation success. d. 5 oducts do not
BI-TJV.21 Java Technology The goal is to provide knowledge and skills for developing information systems and applications through concepts used in software development and from Java language ecosystem. At the course end, the students are able to develop software systems in Java platform. BI-TPS.21 Computer Networks Technologies The course introduces students with basic and advanced technologies, components, and interfaces of contemporary computer networks at the physlic link layer. The lectures provide theoretical foundations of these technologies and explain relevant physical principles. In the labs, the respective technowith the most important ones students will get hands-on experience. Thematically, the course covers both local and long-range optical networks, Ethalways with focus on high-speed networks. BI-TIS.21 Information Systems The goal of this course is to familiarise students with the information systems topic and information systems implementation principles. During the course of the course is the introduction to key ideas of an information system selection, evaluation of information system benefits, wai implementation and information system implementation based on the project management principles. The enphasis is on the initial customer analys decide whether it is better to implement any existing information system or develop a new one from scratch. These factors determine the information systems to BI-TUR.21 User Interface Design Students gain a basic overview of methods for designing and testing common user interfaces. They get experience to solve the problems where soft communicate with the user optimally, since the needs and characteristics of users are not taken into account during product d	experience with like Z,ZK sical layer with the nologies will be de- hernet, modern with Z,ZK ourse, students ar- er types of information s sis, customer insig n system impleme pics are discussed Z,ZK ware and other pr	5 overlap to the emonstrated and reless networks, 5 e introduced to ation systems. systems ht and ability to ntation success. d. 5 oducts do not
BI-TJV.21 Java Technology The goal is to provide knowledge and skills for developing information systems and applications through concepts used in software development and from Java language ecosystem. At the course end, the students are able to develop software systems in Java platform. BI-TPS.21 Computer Networks Technologies The course introduces students with basic and advanced technologies, components, and interfaces of contemporary computer networks at the physical principles. In the labs, the respective technologies and explain relevant physical principles. In the labs, the respective technologies with focus on high-speed networks. BI-TIS.21 Information Systems The goal of this course is to familiarise students with the information systems topic and information systems implementation principles. During the course of the course is to familiarise students with the information systems topic and information systems implementation principles. During the course is to familiarise students with the information systems topic and information system selection, evaluation of information system benefits, wai implementation and information system information based on the project management principles. The emphasis is on the initial customer analys decide whether it is better to implement any existing information system or to develop a new one from scratch. These factors determine the information systems to BI-TUR.21 User Interface Design Students gain a basic overview of methods for designing and testing common user interfaces. They get experience to solve the problems where soft communicate with the user optimally, since the needs and characteristics of users are not taken into account during product development. Students bring	experience with lik Z,ZK sical layer with the nologies will be de- nernet, modern wir Z,ZK ourse, students ar er types of information s sis, customer insig n system impleme pics are discussed Z,ZK ware and other pr gain an overview	5 overlap to the emonstrated and reless networks, 5 e introduced to ation systems. systems ht and ability to ntation success. d. 5 oducts do not of methods that
BI-TJV.21 Java Technology The goal is to provide knowledge and skills for developing information systems and applications through concepts used in software development and from Java language ecosystem. At the course end, the students are able to develop software systems in Java platform. BI-TPS.21 Computer Networks Technologies The course introduces students with basic and advanced technologies, components, and interfaces of contemporary computer networks at the phys link layer. The lectures provide theoretical foundations of these technologies and explain relevant physical principles. In the labs, the respective techn with the most important ones students will get hands-on experience. Thematically, the course covers both local and long-range optical networks. Et always with focus on high-speed networks. BI-TIS.21 Information Systems The goal of this course is to familiarise students with the information systems topic and information systems implementation principles. During the course information system and their usage in specific industry segments. Students are familiarised with the CRM, ERP, MRP and oth The fundamental part of the course is the introduction to key ideas of an information system selection, evaluation of information system enefits, wa implementation and information system security, operation, support, maintenance, legislation impacts, and government information systems to develop a new one from scratch. These factors determine the information systems to BI-TUR.21 User Interface Design Students gain a basic overview of methods for designing and testing common user interfaces. They get experience to solve the problems where soft communicate with the user optimally, since the needs and character	experience with like Z,ZK sical layer with the nologies will be de- nernet, modern with Z,ZK ourse, students ar- er types of information sis sis, customer insig n system impleme pics are discussed Z,ZK ware and other pri- gain an overview Z,ZK	5 overlap to the emonstrated and reless networks, 5 e introduced to ation systems. systems ht and ability to ntation success. d. 5 oducts do not of methods that
BI-TJV.21 Java Technology The goal is to provide knowledge and skills for developing information systems and applications through concepts used in software development and from Java language ecosystem. At the course end, the students are able to develop software systems in Java platform. BI-TJS.21 Computer Networks Technologies The course introduces students with basic and advanced technologies, components, and interfaces of contemporary computer networks at the physlic layer. The lectures provide theoretical foundations of these technologies and explain relevant physical principles. In the labs, the respective technic always with focus on high-speed networks. BI-TIS.21 Information Systems The goal of this course is to familiarise students with the information systems topic and information systems implementation principles. During the cr "on the market" existing types of systems and their usage in specific industry segments. Students are familiarised with the CRM, ERP, MRP and oth The fundamental part of the course is the introduction to key ideas of an information system selection, evaluation of information systems benefits, wai implementation and information systems security, operation, support, maintenance, legislation impacts, and government information systems to EBI-TUR.21 User Interface Design Students gain a basic overview of methods for designing and testing common user interfaces. They get experience to solve the problems where soft communicate with the user optimal interface of subern become familiarise and party with some propertion.	experience with like Z,ZK sical layer with the nologies will be de- nernet, modern with Z,ZK ourse, students ar- er types of information sis sis, customer insig n system impleme pics are discussed Z,ZK ware and other pri- gain an overview Z,ZK ties of language de- ties	5 overlap to the monstrated and reless networks, 5 e introduced to ation systems. systems ht and ability to ntation success. d. 5 oducts do not of methods that 5 escribing the
BI-TJV.21 Java Technology The goal is to provide knowledge and skills for developing information systems and applications through concepts used in software development and from Java language ecosystem. At the course end, the students are able to develop software systems in Java platform. BI-TPS.21 Computer Networks Technologies The course introduces students with basic and advanced technologies, components, and interfaces of contemporary computer networks at the phys link layer. The lectures provide theoretical foundations of these technologies and explain relevant physical principles. In the labs, the respective techn with the most important ones students will get hands-on experience. Thematically, the course covers both local and long-range optical networks. Et always with focus on high-speed networks. BI-TIS.21 Information Systems The goal of this course is to familiarise students with the information systems topic and information systems implementation principles. During the course information system and their usage in specific industry segments. Students are familiarised with the CRM, ERP, MRP and oth The fundamental part of the course is the introduction to key ideas of an information system selection, evaluation of information system enefits, wa implementation and information system security, operation, support, maintenance, legislation impacts, and government information systems to develop a new one from scratch. These factors determine the information systems to BI-TUR.21 User Interface Design Students gain a basic overview of methods for designing and testing common user interfaces. They get experience to solve the problems where soft communicate with the user optimally, since the needs and character	experience with lik Z,ZK sical layer with the nologies will be de- nernet, modern wir Z,ZK ourse, students ar er types of information s sis, customer insig n system impleme pics are discussed Z,ZK tware and other pr gain an overview Z,ZK ties of language do s, which will be de-	braries and tools 5 overlap to the emonstrated and reless networks, 5 e introduced to ation systems. bit and ability to ntation success. d. 5 oducts do not of methods that 5 escribing the emonstrated in
BI-TJV.21 Java Technology The goal is to provide knowledge and skills for developing information systems and applications through concepts used in software development and from Java language ecosystem. At the course end, the students are able to develop software systems in Java platform. BI-TPS.21 Computer Networks Technologies The course introduces students with basic and advanced technologies, components, and interfaces of contemporary computer networks at the phys link layer. The lectures provide theoretical foundations of these technologies and explain relevant physical principles. In the labs, the respective technologies and explain relevant physical principles. In the labs, the respective technologies and explain relevant physical principles. In the labs, the respective technologies due to the set important ones students will get hands-on experience. Thematically, the course covers both local and long-range optical networks, Eth always with focus on high-speed networks. BI-TIS.21 Information Systems The goal of this course is to familiarise students with the information systems topic and information system implementation principles. During the course is the introduction to key ideas of an information system selection, evaluation of information system benefits, wai implementation and information system implementation based on the project management principles. The emphasis is on the initial customer analys develop a new one from scratch. These factors determine the information systems to the end of the course information systems security, operation, support, maintenance, legislation impacts, and government information systems to communicate with the user optimally, since the needs and characteristics of users are not taken into account during product develo	experience with lik Z,ZK sical layer with the nologies will be de- nernet, modern wir Z,ZK ourse, students ar er types of information s sis, customer insig n system impleme pics are discussed Z,ZK tware and other pr gain an overview Z,ZK ties of language do s, which will be de-	braries and tools 5 overlap to the emonstrated and reless networks, 5 e introduced to ation systems. bit and ability to ntation success. d. 5 oducts do not of methods that 5 escribing the emonstrated in
BI-TJV.21 Java Technology The goal is to provide knowledge and skills for developing information systems and applications through concepts used in software development and from Java language eccsystem. At the course end, the students are able to develop software systems in Java platform. BI-TDS.21 Computer Networks Technologies The course introduces students with basic and advanced technologies, components, and interfaces of contemporary computer networks at the physink layer. The lectures provide theoretical foundations of these technologies and explain relevant physical principles. In the labs, the respective techn with the most important ones students will get hands-on experience. Thematically, the course covers both local and long-range optical networks. Ethalways with focus on high-speed networks. BI-TIS.21 Information Systems The goal of this course is to familiarise students with the information systems topic and information systems implementation principles. During the course is to familiarise students with usage in specific industry segments. Students are familiarised with the CRM, ERP, MRP and oth The fundamental part of the course is the introduction to key ideas of an information system selection, evaluation of information system benefits, wai implementation and information system security, operation, support, maintenance, legislation impacts, and government information systems to BI-TUR.21 BI-TUR.21 User Interface Design Students gain a basic overview of methods for designing and testing common user interfaces. They get experience to solve the problems where soft communicate with the user optimalinisel (kitit), the students become familiari with HTTP and its pos	experience with lik Z,ZK sical layer with the nologies will be de- nernet, modern wir Z,ZK ourse, students ar er types of information s sis, customer insig n system impleme pics are discussed Z,ZK ware and other pr gain an overview Z,ZK ties of language de s, which will be de fony 2, Doctrine 2.	braries and tools 5 overlap to the emonstrated and reless networks, 5 e introduced to ation systems. bit and ability to ntation success. d. 5 oducts do not of methods that 5 escribing the emonstrated in
BI-TJV.21 Java Technology The goal is to provide knowledge and skills for developing information systems and applications through concepts used in software development and from Java language eccsystem. At the course end, the students are able to develop software systems in Java platform. BI-TDS.21 Computer Networks Technologies The course introduces students with basic and advanced technologies, components, and interfaces of contemporary computer networks at the physink layer. The lectures provide theoretical foundations of these technologies and explain relevant physical principles. In the labs, the respective techn with the most important ones students will get hands-on experience. Thematically, the course covers both local and long-range optical networks. Ethalways with focus on high-speed networks. BI-TIS.21 Information Systems The goal of this course is to familiarise students with the information systems topic and information systems implementation principles. During the course is to familiarise students with usage in specific industry segments. Students are familiarised with the CRM, ERP, MRP and oth The fundamental part of the course is the introduction to key ideas of an information system selection, evaluation of information system benefits, wai implementation and information system security, operation, support, maintenance, legislation impacts, and government information systems to BI-TUR.21 BI-TUR.21 User Interface Design Students gain a basic overview of methods for designing and testing common user interfaces. They get experience to solve the problems where soft communicate with the user optimalinisel (kitit), the students become familiari with HTTP and its pos	experience with like Z,ZK sical layer with the nologies will be de- nologies will be de- nourse, students ar- er types of information sis sis, customer insig n system impleme pics are discussed Z,ZK tware and other pr gain an overview Z,ZK ties of language de- s, which will be de- fony 2, Doctrine 2. Z,ZK	5 overlap to the monstrated and reless networks, 5 e introduced to ation systems. systems ht and ability to ntation success. d. 5 oducts do not of methods that 5 escribing the emonstrated in Developments
BI-TJV.21 Java Technology The goal is to provide knowledge and skills for developing information systems and applications through concepts used in software development and from Java language ecosystem. At the course end, the students are able to develop software systems in Java platform. BI-TDS.21 Computer Networks Technologies, components, and interfaces of contemporary computer networks at the phys link layer. The lectures provide theoretical foundations of these technologies and explain relevant physical principles. In the labs, the respective techn with the most important ones students will get hands-on experience. Thematically, the course covers both local and long-range optical networks, Ett always with focus on high-speed networks. BI-TIS.21 Information Systems The goal of this course is to familiarise students with the information systems topic and information systems implementation principles. During the course is to familiarise students with the information system segments. Students are familiarised with the CRM, ERP, MRP and oth The fundamental part of the course is the introduction to key ideas of an information system selection, evaluation of information system benefits, wa implementation and information systems security, operation, support, maintenance, legislation impacts, and government information systems to to develop a new one from scratch. These factors determine the information systems to interface Design Students gain a basic overview of methods for designing and testing common user interfaces. They get experience to solve the problems where soft communicate with the user optimally, since the needs and characteristics of users are not taken into account during product development. Students gain a basic overview of methods for designing and	experience with lik Z,ZK sical layer with the nologies will be deternet, modern with Z,ZK ourse, students ar er types of information sis, customer insign system implement pics are discussed Z,ZK ware and other prigain an overview Z,ZK ties of language data s, which will be data to the structure of the systems and service and se	braries and tools 5 overlap to the emonstrated and reless networks, 5 e introduced to ation systems. bit and ability to ntation success. d. 5 oducts do not of methods that 5 escribing the emonstrated in Developments 5 ices. The course
BI-TJV.21 Java Technology The goal is to provide knowledge and skills for developing information systems and applications through concepts used in software development and from Java language ecosystem. At the course end, the students are able to develop software systems in Java platform. BI-TPS.21 Computer Networks Technologies The course introduces students with basic and advanced technologies, components, and interfaces of contemporary computer networks at the physical principles. In the labs, the respective technologies and explain relevant physical principles. In the labs, the respective technologies with focus on high-speed networks. BI-TIS.21 Information Systems The goal of this course is to familiarise students with the information systems topic and information systems implementation principles. During the course of systems and their usage in specific industry segments. Students are familiarised with the CRM, ERP, MRP and oth The fundamental part of the course is the introduction to key ideas of an information system selection, evaluation of information system rangementation and information system implementation based on the project management principles. The emphasis is on the initial customer analys decide whether it is better to implement any existing information system or to develop a new one from scratch. These factors determine the information systems to BI-TUR.21 User Interface Design Students gain a basic coverview of methods for designing and testing common user interfaces. They get experience to solve the problems where soft communicate with the user optimally, since the needs and characteristics of users are not taken into account during product development. Students bring users into the deve	experience with lik Z,ZK sical layer with the nologies will be deternet, modern with Z,ZK ourse, students ar er types of information sis, customer insign system implement pics are discussed Z,ZK ware and other prigain an overview Z,ZK ties of language data, which will be data on y 2, Doctrine 2. Z,ZK systems and servuilding and deploying	braries and tools 5 overlap to the emonstrated and reless networks, 5 e introduced to ation systems. bit and ability to ntation success. d. 5 oducts do not of methods that 5 escribing the emonstrated in Developments 5 ices. The course ing software to
BI-TJV.21 Java Technology The goal is to provide knowledge and skills for developing information systems and applications through concepts used in software development and from Java language ecosystem. At the course end, the students are able to develop software systems in Java platform. BI-TPS.21 Computer Networks Technologies The course introduces students with basic and advanced technologies, components, and interfaces of contemporary computer networks at the physink layer. The lectures provide theoretical foundations of these technologies and explain relevant physical principles. In the labs, the respective technic with the most important ones students will get hands-on experience. Thematically, the course covers both local and long-range optical networks. Ethalways with focus on high-speed networks. BI-TIS.21 Information Systems The goal of this course is to familiarise students with the information system stopic and information system simplementation principles. During the course information system simplementation and information system benefits, wai implementation and information system is specific industry segments. Students are familiarised with the CRM, ERP, MRP and oth The fundamental part of the course is the introduction to key ideas of an information system selection, evaluation of information system benefits, wai implementation and information systems implementation system security, operation, support, maintenance, legislation impacts, and government information systems to BI-TUR.21 User Interface Design Students are not taken into account during product development. Students are not taken into account during product development. Students bring users into the development process to ensure optima	experience with lik Z,ZK sical layer with the nologies will be deternet, modern with Z,ZK ourse, students ar er types of information sis, customer insign system implement pics are discussed Z,ZK ware and other prigain an overview Z,ZK ties of language data, which will be data on y 2, Doctrine 2. Z,ZK systems and servuilding and deploying	braries and tools 5 overlap to the emonstrated and reless networks, 5 e introduced to ation systems. bit and ability to ntation success. d. 5 oducts do not of methods that 5 escribing the emonstrated in Developments 5 ices. The course ing software to
BI-TJV.21 Java Technology The goal is to provide knowledge and skills for developing information systems and applications through concepts used in software development and from Java language ecosystem. At the course end, the students are able to develop software systems in Java platform. BI-TS2.1 Computer Networks Technologies The course introduces students with basic and advanced technologies, components, and interfaces of contemporary computer networks at the physicial principles. In the labs, the respective tech with the most important ones students will get hands-on experience. Thematically, the course covers both local and long-range optical networks. Eth always with focus on high-speed networks. BI-TIS.21 Information Systems The goal of this course is to familiarise students with the information systems topic and information systems implementation principles. During the course is the introduction to key ideas of an information system selection, evaluation of information system benefits, wai implementation and information system implementation based on the project management principles. The emphasis is on the initial customer analys decide whether it is better to implement any existing information system to tavelop a new one from scratch. These factors determine the information systems to to develop a new one from scratch. These factors determine the information system security, operation, support, maintenance, legislation impacts, and government information systems to to develop ane wone from scratch. These factors determine the soft communicate with the user optimally, since the needs and characteristics of users are not taken into account during product development. Students bering users into the development process to ensure optimal interface for them.<	experience with lik Z,ZK sical layer with the nologies will be deternet, modern with Z,ZK ourse, students ar er types of information sis, customer insign system implement pics are discussed Z,ZK ware and other prigain an overview Z,ZK ties of language data, which will be data on y 2, Doctrine 2. Z,ZK systems and servuilding and deploying	braries and tools 5 overlap to the emonstrated and reless networks, 5 e introduced to ation systems. bit and ability to ntation success. d. 5 oducts do not of methods that 5 escribing the emonstrated in Developments 5 ices. The course ing software to
BI-TJV.21 Java Technology The goal is to provide knowledge and skills for developing information systems and applications through concepts used in software development and from Java language ecosystem. At the course end, the students are able to develop software systems in Java platform. BI-TPS.21 Computer Networks Technologies The course introduces students with basic and advanced technologies, components, and interfaces of contemporary computer networks at the physink layer. The lectures provide theoretical foundations of these technologies and explain relevant physical principles. In the labs, the respective technologies on experience. Thematically, the course covers both local and long-range optical networks. Et always with focus on high-speed networks. BI-TIS.21 Information Systems The goal of this course is to familiarise students with the information systems topic and information systems implementation principles. During the course is the introduction to key ideas of an information system selection, evaluation of information system benefits, wa implementation and information system implementation based on the project management principles. The emphasis is on the initial customer analys decide whether it is better to implement any existing information system or to develop a new one from scratch. These factors determine the information system security, operation, support, maintenance, legislation impacts, and government information systems to BI-TUR.21 BI-TUR.21 User Interface Design Students gain a basic overview of methods for designing and testing common user interfaces. They get experience to solve the problems where soft communicate with the user optimally, since t	experience with like Z,ZK sical layer with the nologies will be deternet, modern with Z,ZK ourse, students ar er types of information sis, customer insign system implements are discussed Z,ZK ware and other prigain an overview Z,ZK ties of language data s, which will be data to the prigain an overview Z,ZK ties of language data s, which will be data to the prigain an overview Z,ZK ties of language data to the prigain an overview Z,ZK ties of language data to the prigain an overview Z,ZK ties of language data to the prigain and other prigain an overview Z,ZK ties of language data to the prigain and to t	braries and tools 5 overlap to the emonstrated and reless networks, 5 e introduced to ation systems. bit and ability to ntation success. d. 5 oducts do not of methods that 5 escribing the emonstrated in Developments 5 ices. The course ing software to technologies 5
BI-TJV.21 Java Technology The goal is to provide knowledge and skills for developing information systems and applications through concepts used in software development and from Java language ecosystem. At the course end, the students are able to develop software systems in Java platform. BI-TPS.21 Computer Networks Technologies The course introduces students with basic and advanced technologies, components, and interfaces of contemporary computer networks at the physinit the most students will get hands-on experience. Thematically, the course covers both local and long-range optical networks. BI-TIS.21 Information Systems The goal of this course is to familiarise students with the information systems topic and information systems implementation principles. During the course is to familiarise students with usage in specific industry segments. Students are familiarised with the CRM, ERP, MRP and oth The fundamental part of the course is the introduction to key ideas of an information system selection, evaluation of information system based on the project management principles. The emphasis is on the initial customer analys decide whether it is better to implement any existing information support, maintenance, legislation impacts, and government information systems to the develop and of the course information system selectrify, operation, support, maintenance, legislation inpacts, and government information systems bring users into the development. Process to ensure optimal interface for them. BI-TUR.21 User Interface Design Students gain a basic overview of methods for designing and testing common user interfaces. They get experience to solve the problems where soft communicat	experience with like Z,ZK sical layer with the nologies will be deternet, modern with Z,ZK ourse, students ar er types of information sis, customer insign system implements are discussed Z,ZK ware and other prigain an overview Z,ZK ties of language data s, which will be data to the prigain an overview Z,ZK ties of language data s, which will be data to the prigain an overview Z,ZK ties of language data to the prigain an overview Z,ZK ties of language data to the prigain an overview Z,ZK ties of language data to the prigain and other prigain an overview Z,ZK ties of language data to the prigain and to t	braries and tools 5 overlap to the emonstrated and reless networks, 5 e introduced to ation systems. bit and ability to ntation success. d. 5 oducts do not of methods that 5 escribing the emonstrated in Developments 5 ices. The course ing software to technologies 5
BI-TJV.21 Java Technology The goal is to provide knowledge and skills for developing information systems and applications through concepts used in software development and from Java language ecosystem. At the course end, the students are able to develop software systems in Java platform. BI-TPS.21 Computer Networks Technologies The ocurse introduces students with basic and advanced technologies, components, and interfaces of contemporary computer networks at the physical principles. In the labs, the respective techn with the most important ones students will get hands-on experience. Thematically, the course covers both local and long-range optical networks, Ett always with focus on high-speed networks. BI-TIS.21 Information Systems The goal of this course is to familiarise students with the information system stopic and information system benefits, wa implementation to the course is the introduction to key ideas of an information system cellon, evaluation of information system benefits, wa implementation and information system security, operation, support, maintenance, legislation impacts, and government information systems security, operation, support, maintenance, legislation impacts, and government information systems to alwelop anew one from scratch. These factors determine the information string the development process to ensure optimal interface for them. BI-TUR.21 User Interface Design Students gain a basic overview of methods for designing and testing common user interfaces. They get experience to solve the problems where soft communicate with the user optimal interface for them. BI-TWR.21 Design of Web Application	experience with like Z,ZK sical layer with the nologies will be deternet, modern with Z,ZK ourse, students ar er types of information sis, customer insign system implements are discussed Z,ZK ware and other prigain an overview Z,ZK ties of language data s, which will be data to the prigain an overview Z,ZK ties of language data s, which will be data to the prigain an overview Z,ZK ties of language data to the prigain an overview Z,ZK ties of language data to the prigain an overview Z,ZK ties of language data to the prigain and other prigain an overview Z,ZK ties of language data to the prigain and to t	braries and tools 5 overlap to the emonstrated and reless networks, 5 e introduced to ation systems. bit and ability to ntation success. d. 5 oducts do not of methods that 5 escribing the emonstrated in Developments 5 ices. The course ing software to technologies 5
BI-TJV.21 Java Technology The goal is to provide knowledge and skills for developing information systems and applications through concepts used in software development and from Java language ecosystem. At the course end, the students are able to develop software systems in Java platform. BI-TPS.2.1 Computer Networks Technologies The course introduces students with basic and advanced technologies, components, and interfaces of contemporary computer networks at the physic important ones students will get hands-on experience. Thematically, the course covers both local and long-range optical networks, Etr always with focus on high-speed networks. BI-TIS.21 Information Systems The goal of this course is to familiarise students with the information systems topic and information systems implementation principles. During the core of on the market" existing types of systems and their usage in specific industry segments. Students are familiarised with the CRM, ERP, MRP and toth The fundamental part of the course is the introduction to key ideas of an information system stelection, evaluation of information system benefits, wa implementation system implementation based on the project management principles. The emphasis is on the initial customer analys decide whether it is better to implement any existing information system or to develop a new one from scratch. These factors determine the information system security, operation, support, maintenance, legislation impacts, and government information systems bring users into the development process to ensure optimal interface for them. BI-TUR.21 User Interface Design Students gain a basic overview of methods for designing and testing commo	experience with like Z,ZK sical layer with the nologies will be de- hernet, modern with z,ZK ourse, students ar- er types of informations sis, customer insign in system impleme- pics are discussed Z,ZK ware and other pri- gain an overview Z,ZK ties of language de- tion 2, Doctrine 2. Z,ZK systems and serv uilding and deploying inted with modern Z,ZK overview of threats Z,ZK	braries and tools 5 overlap to the monstrated and reless networks, 5 e introduced to ation systems. bit and ability to ntation success. d. 5 oducts do not of methods that 5 excribing the emonstrated in Developments 5 icces. The course ing software to technologies 5 s in cyberspace 5

	Î.	·	Υ <u>΄</u>
BI-VDC.21	Virtualization and Data Centers	Z,ZK	5
The aim of the course is	s to familiarize students with technology basis of cloud computer systems. It shows principles and techniques used in design	and implementation	on of data center
infrastructure, such as v	rarious kinds of virtualization and high availability of servers, storages, and software layers. The course guides through data	center technologie	es from private
to public and hybrid clos	uds. Student learn current trends in the architecture of IT infrastructure and its configuration for classic and cloud application	s. Students will ur	derstand the
design, validation, and	operation of complex infrastructures for modern applications with respect to scalability and protection against overloads, outa	ages, and data los	Ses.
BI-VPS.21	Selected Topics in Computer Networking	Z,ZK	5
The course builds upon	the Computer Networks course (BI-PSI), obligatory for the program. Students will learn in detail principles, protocols, and tech	nologies used in n	nodern computer
networks from local are	a networks up to Internet, with focus on switching, routing, security, and virtualization. The emphasis will be on gaining practi	cal experience wi	th real network
devices in the lab and le	earning important methods of local area and wide area networks from the viewpoint of functionality, performance, and securi	ty.	
BI-FEM.21	Fundamentals of Economics	Z,ZK	5
The course allows the s	, tudents to discover basics of economic theory, which will then be used in subsequent courses of economics and manageme	nt. It contains a g	eneral overview
of fundamental microec	onomic and macroeconomic topics.		
BI-ZRS.21	Basics of System Control	Z,ZK	5
The course gives an int	roduction to the field of automatic control. Students will gain knowledge in this rapidly evolving field of great future. We will for	cus our attention r	particularly on
control of engineering a	nd physical systems. We will provide basic information from the feedback control of linear dynamical SISO systems, descript	ion methods of sy	/stem models,
basic linear dynamic sys	stems analysis and design verification, simple PID feedback, PSD, and fuzzy controllers. Students will learn the methods of c	reating a descripti	on of the system
model, the basic linear	dynamic systems analysis and design verification and simple PID feedback, PSD, and fuzzy controllers. Attention is also give	en to sensors and	actuators in
control loops, issues of	stability in control systems, single and continuous adjustment of the controller parameters, and certain aspects of the indust	rial implementatio	n of continuous
and digital controllers a	nd PLC control.		
BI-ZSB.21	Basics of System Security	Z,ZK	5
The goal of the course i	s to provide introduction to basic concepts in security of computer systems. Further, the course introduces the basics of fore	nsic analysis and	related topics
such as malware analys	sis or incident response. After finishing the course student will get both theoretical and practical knowledge in the area of more	dern operating sy	stems security,
as well as skills needed	for independent work in the area of operating system security incident analysis.		

List of courses of this pass:

	Name of the course	Completion	Credits
BI-3DT.1	3D Printing	KZ	4
BI-A2L	English language, preparation for the B2 level exam	Z	2
The content of the co	purse corresponds to the preparation for the English exam at the B2 level. Requirements for course credit. Academic Achievement	- students are due	to: -Take an
active part in the lar	nguage instructionMeet the requirements for writing assignments - Summary, Abstract, Argumentation PaperSucceed in both t	he midterm and the	e final term
tests with the success	s rate set at 70%80% and over in BOTH tests means ORAL EXAM ONLY (no written part). Requirements will be specified by ind	lividual teachers du	ring the firs
	class of the term.		
BI-AAG.21	Automata and Grammars	Z,ZK	5
Students are introduc	ced to basic theoretical and implementation principles of the following topics: construction, use and mutual transformations of finite	automata, regular e	expressions
and regular grammar	s, context-free grammars, construction and use of pushdown automata, and translation grammars and transducers. They know the	e hierarchy of forma	al languages
and they	understand the relationships between formal languages and automata. They are introduced to the Turing machine and complexity	classes P and NP.	
BI-ACM	Programming Practices 1	KZ	5
	This is a selective course for preparing talented student for representation in international programming contests.	1	I
BI-ACM2	Programming Practices 2	KZ	5
1	This is a selective course for preparing talented student for representation in international programming contests.	1	1
BI-ACM3	Programming Practices 3	KZ	5
	This is a selective course for preparing talented student for representation in international programming contests.		, C
BI-ACM4	Programming Practices 4	KZ	5
	This is a selective course for preparing talented student for representation in international programming contests.		0
BI-ADU.21	Unix Administration	Z.ZK	5
		1 '	-
Students will learn the	e internal structure of the UNIX operating system, with the administration of its basic subsystems and with the security principles. They	/ will understand the	e differences
Students will learn the between user and ad	e internal structure of the UNIX operating system, with the administration of its basic subsystems and with the security principles. They ministrator roles. They will get theoretical and practical knowledge of user management and administration, of users access rights,	v will understand the file systems, disk s	e differences subsystems
Students will learn the between user and ad	e internal structure of the UNIX operating system, with the administration of its basic subsystems and with the security principles. They	v will understand the file systems, disk s	e differences subsystems,
Students will learn the between user and ad processes, memory	e internal structure of the UNIX operating system, with the administration of its basic subsystems and with the security principles. They ministrator roles. They will get theoretical and practical knowledge of user management and administration, of users access rights, , network services and remote access, and in the areas of system deployment and virtualization. In the labs, they will verify the kn specific examples from practice.	/ will understand the file systems, disk s owledge from the le	e differences subsystems, ectures on
Students will learn the between user and ad	e internal structure of the UNIX operating system, with the administration of its basic subsystems and with the security principles. They ministrator roles. They will get theoretical and practical knowledge of user management and administration, of users access rights, , network services and remote access, and in the areas of system deployment and virtualization. In the labs, they will verify the kn specific examples from practice. Windows Administration	v will understand the file systems, disk s	e differences subsystems,
Students will learn the between user and ad processes, memory BI-ADW.1	e internal structure of the UNIX operating system, with the administration of its basic subsystems and with the security principles. They iministrator roles. They will get theoretical and practical knowledge of user management and administration, of users access rights, , network services and remote access, and in the areas of system deployment and virtualization. In the labs, they will verify the kn specific examples from practice. Windows Administration This course is presented in Czech. However, there is an English variant in the program Informatics (B1801 / 4753).	will understand the file systems, disk sowledge from the le	e differences subsystems ectures on 4
Students will learn the between user and add processes, memory BI-ADW.1 BI-AG1.21	e internal structure of the UNIX operating system, with the administration of its basic subsystems and with the security principles. They iministrator roles. They will get theoretical and practical knowledge of user management and administration, of users access rights, i, network services and remote access, and in the areas of system deployment and virtualization. In the labs, they will verify the knowledge of user management and structure of the UNIX operating system, with the areas of system deployment and virtualization. In the labs, they will verify the knowledge of user management and structure access, and in the areas of system deployment and virtualization. In the labs, they will verify the knowledge of user management and structure access. Windows Administration This course is presented in Czech. However, there is an English variant in the program Informatics (B1801 / 4753). Algorithms and Graphs 1	vill understand the file systems, disk s owledge from the le Z,ZK	e differences subsystems ectures on 4 5
Students will learn the between user and add processes, memory BI-ADW.1 BI-AG1.21 The course covers	e internal structure of the UNIX operating system, with the administration of its basic subsystems and with the security principles. They iministrator roles. They will get theoretical and practical knowledge of user management and administration, of users access rights, , network services and remote access, and in the areas of system deployment and virtualization. In the labs, they will verify the knowledge of user management and administration, of users access rights, specific examples from practice. Windows Administration This course is presented in Czech. However, there is an English variant in the program Informatics (B1801 / 4753). Algorithms and Graphs 1 the basics of efficient algorithm design, data structures, and graph theory, belonging to the core knowledge of every computing cu	will understand the file systems, disk s owledge from the le Z,ZK Z,ZK rriculum. It links an	e differencess subsystems, ectures on 4 5 d partially
Students will learn the between user and add processes, memory BI-ADW.1 BI-AG1.21 The course covers develops the knowle	e internal structure of the UNIX operating system, with the administration of its basic subsystems and with the security principles. They iministrator roles. They will get theoretical and practical knowledge of user management and administration, of users access rights, , network services and remote access, and in the areas of system deployment and virtualization. In the labs, they will verify the knowledge from practice. Windows Administration This course is presented in Czech. However, there is an English variant in the program Informatics (B1801 / 4753). Algorithms and Graphs 1 the basics of efficient algorithm design, data structures, and graph theory, belonging to the core knowledge of every computing cue adge from the course BI-DML.21, in which students acquire the knowledge and skills in combinatorics necessary for evaluating the	will understand the file systems, disk s lowledge from the le Z,ZK Z,ZK rriculum. It links an time and space co	e differencess subsystems, ectures on 4 5 d partially
Students will learn the between user and ad processes, memory BI-ADW.1 BI-AG1.21 The course covers develops the knowle algorith	e internal structure of the UNIX operating system, with the administration of its basic subsystems and with the security principles. They iministrator roles. They will get theoretical and practical knowledge of user management and administration, of users access rights, , network services and remote access, and in the areas of system deployment and virtualization. In the labs, they will verify the knowledge from practice. Windows Administration This course is presented in Czech. However, there is an English variant in the program Informatics (B1801 / 4753). Algorithms and Graphs 1 the basics of efficient algorithm design, data structures, and graph theory, belonging to the core knowledge of every computing cu adding from the course BI-DML.21, in which students acquire the knowledge and skills in combinatorics necessary for evaluating the hms. The course also follows up knowledge from BI-MA1.21, the practical usage of asymptotic mathematics, in particular, the asymptotic mathematics, in parti	will understand the file systems, disk s owledge from the le Z,ZK Z,ZK rriculum. It links an time and space co mptotic notation.	differences subsystems ectures on 4 5 d partially mplexity of
Students will learn the between user and ad processes, memory BI-ADW.1 BI-AG1.21 The course covers develops the knowle algoritt BI-AG2.21	e internal structure of the UNIX operating system, with the administration of its basic subsystems and with the security principles. They iministrator roles. They will get theoretical and practical knowledge of user management and administration, of users access rights, a network services and remote access, and in the areas of system deployment and virtualization. In the labs, they will verify the knowledge from practice. Windows Administration This course is presented in Czech. However, there is an English variant in the program Informatics (B1801 / 4753). Algorithms and Graphs 1 the basics of efficient algorithm design, data structures, and graph theory, belonging to the core knowledge of every computing cue adge from the course BI-DML.21, in which students acquire the knowledge and skills in combinatorics necessary for evaluating the hms. The course also follows up knowledge from BI-MA1.21, the practical usage of asymptotic mathematics, in particular, the asymptotic mathematics, in particular, t	will understand the file systems, disk s iowledge from the le Z,ZK Z,ZK rrriculum. It links an time and space co mptotic notation. Z,ZK	differences subsystems, ectures on 4 5 d partially mplexity of 5
Students will learn the between user and ad processes, memory BI-ADW.1 BI-AG1.21 The course covers develops the knowle algoritt BI-AG2.21 This course, presen	e internal structure of the UNIX operating system, with the administration of its basic subsystems and with the security principles. They iministrator roles. They will get theoretical and practical knowledge of user management and administration, of users access rights, , network services and remote access, and in the areas of system deployment and virtualization. In the labs, they will verify the knowledge from practice. Windows Administration This course is presented in Czech. However, there is an English variant in the program Informatics (B1801 / 4753). Algorithms and Graphs 1 the basics of efficient algorithm design, data structures, and graph theory, belonging to the core knowledge of every computing cu adding from the course BI-DML.21, in which students acquire the knowledge and skills in combinatorics necessary for evaluating the hms. The course also follows up knowledge from BI-MA1.21, the practical usage of asymptotic mathematics, in particular, the asymptotic mathematics, in parti	will understand the file systems, disk s owledge from the le Z,ZK Z,ZK rrriculum. It links an time and space co mptotic notation. Z,ZK y course BI-AG1.2 ⁻¹	differences subsystems ectures on 4 5 d partially mplexity of 5 1. It further
Students will learn the between user and ad processes, memory BI-ADW.1 BI-AG1.21 The course covers develops the knowle algoritt BI-AG2.21 This course, presen	e internal structure of the UNIX operating system, with the administration of its basic subsystems and with the security principles. They iministrator roles. They will get theoretical and practical knowledge of user management and administration, of users access rights, with the administrator roles. They will get theoretical and practical knowledge of user management and administration, of users access rights, with the areas of system deployment and virtualization. In the labs, they will verify the knowledge from practice. Windows Administration This course is presented in Czech. However, there is an English variant in the program Informatics (B1801 / 4753). Algorithms and Graphs 1 the basics of efficient algorithm design, data structures, and graph theory, belonging to the core knowledge of every computing curved adge from the course BI-DML.21, in which students acquire the knowledge and skills in combinatorics necessary for evaluating the hms. The course also follows up knowledge from BI-MA1.21, the practical usage of asymptotic mathematics, in particular, the asymptotic Algorithms and Graphs 2 the din Czech, introduces basic algorithms and concepts of graph theory as a follow=up on the introduction given in the compulsor	will understand the file systems, disk s owledge from the le Z,ZK Z,ZK rrriculum. It links an time and space co mptotic notation. Z,ZK y course BI-AG1.2 ⁻¹	differences subsystems ectures on 4 5 d partially mplexity of 5 1. It further
Students will learn the between user and ad processes, memory BI-ADW.1 BI-AG1.21 The course covers develops the knowle algoritt BI-AG2.21 This course, presen delves into advance	a internal structure of the UNIX operating system, with the administration of its basic subsystems and with the security principles. They iministrator roles. They will get theoretical and practical knowledge of user management and administration, of users access rights, in the areas of system deployment and virtualization. In the labs, they will verify the knowledge from practice. Windows Administration This course is presented in Czech. However, there is an English variant in the program Informatics (B1801 / 4753). Algorithms and Graphs 1 the basics of efficient algorithm design, data structures, and graph theory, belonging to the core knowledge of every computing curve dege from the course BI-DML.21, in which students acquire the knowledge and skills in combinatorics necessary for evaluating the hms. The course also follows up knowledge from BI-MA1.21, the practical usage of asymptotic mathematics, in particular, the asymptotic mathematics, and graph theory as a follow=up on the introduction given in the compulsor is data structures and amortized complexity analysis. It also includes a very light introduction to approximation algorithms. For Eng BIE-AG2.21.	will understand the file systems, disk s owledge from the le Z,ZK Z,ZK rrriculum. It links an time and space co mptotic notation. Z,ZK y course BI-AG1.2' lish version of the o	differences subsystems, ectures on 4 5 d partially mplexity of 5 1. It further
Students will learn the between user and ad processes, memory BI-ADW.1 BI-AG1.21 The course covers develops the knowle algoritt BI-AG2.21 This course, presen	e internal structure of the UNIX operating system, with the administration of its basic subsystems and with the security principles. They iministrator roles. They will get theoretical and practical knowledge of user management and administration, of users access rights, where the access, and in the areas of system deployment and virtualization. In the labs, they will verify the knowledge from practice. Windows Administration This course is presented in Czech. However, there is an English variant in the program Informatics (B1801 / 4753). Algorithms and Graphs 1 the basics of efficient algorithm design, data structures, and graph theory, belonging to the core knowledge of every computing curve age from the course BI-DML.21, in which students acquire the knowledge and skills in combinatorics necessary for evaluating the hms. The course also follows up knowledge from BI-MA1.21, the practical usage of asymptotic mathematics, in particular, the asymptotic mathematics, in particular, the asymptotic mathematics, in particular, the asymptotic mathematics and Graphs 2 the din Czech, introduces basic algorithms and concepts of graph theory as a follow=up on the introduction given in the compulsor as data structures and amortized complexity analysis. It also includes a very light introduction to approximation algorithms. For Eng	will understand the file systems, disk s owledge from the le Z,ZK Z,ZK rrriculum. It links an time and space co mptotic notation. Z,ZK y course BI-AG1.2 ⁻¹	differences subsystems, ectures on 4 5 d partially mplexity of 5 1. It further course see
Students will learn the between user and ad processes, memory BI-ADW.1 BI-AG1.21 The course covers develops the knowle algoriti BI-AG2.21 This course, presen delves into advance BI-ALO	a internal structure of the UNIX operating system, with the administration of its basic subsystems and with the security principles. They iministrator roles. They will get theoretical and practical knowledge of user management and administration, of users access rights, a network services and remote access, and in the areas of system deployment and virtualization. In the labs, they will verify the knowledge form practice. Windows Administration This course is presented in Czech. However, there is an English variant in the program Informatics (B1801 / 4753). Algorithms and Graphs 1 the basics of efficient algorithm design, data structures, and graph theory, belonging to the core knowledge of every computing curve dage from the course BI-DML.21, in which students acquire the knowledge and skills in combinatorics necessary for evaluating the hms. The course also follows up knowledge from BI-MA1.21, the practical usage of asymptotic mathematics, in particular, the asymptotic mathematics, in particular, the asymptotic mathematics and amortized complexity analysis. It also includes a very light introduction to approximation algorithms. For Eng BIE-AG2.21. Algebra and Logic The course extends and deepens the study of topics touched upon in the basic course in logic.	will understand the file systems, disk s lowledge from the le Z,ZK rriculum. It links an time and space co mptotic notation. Z,ZK y course BI-AG1.2' lish version of the o	differences subsystems, ectures on 4 5 d partially omplexity of 5 1. It further course see 4
Students will learn the between user and ad processes, memory BI-ADW.1 BI-AG1.21 The course covers develops the knowle algoritt BI-AG2.21 This course, presen delves into advance	a internal structure of the UNIX operating system, with the administration of its basic subsystems and with the security principles. They iministrator roles. They will get theoretical and practical knowledge of user management and administration, of users access rights, , network services and remote access, and in the areas of system deployment and virtualization. In the labs, they will verify the knowledge from practice. Windows Administration This course is presented in Czech. However, there is an English variant in the program Informatics (B1801 / 4753). Algorithms and Graphs 1 the basics of efficient algorithm design, data structures, and graph theory, belonging to the core knowledge of every computing cu adge from the course BI-DML.21, in which students acquire the knowledge and skills in combinatorics necessary for evaluating the hms. The course also follows up knowledge from BI-MA1.21, the practical usage of asymptotic mathematics, in particular, the asymptotic and in Czech, introduces basic algorithms and concepts of graph theory as a follow=up on the introduction given in the compulsor as data structures and amortized complexity analysis. It also includes a very light introduction to approximation algorithms. For Eng BIE-AG2.21. Algebra and Logic The course extends and deepens the study of topics touched upon in the basic course in logic. Programming for the Android Operating System	will understand the file systems, disk s owledge from the le Z,ZK Z,ZK rrriculum. It links an time and space co mptotic notation. Z,ZK y course BI-AG1.2' lish version of the o	differences subsystems, ectures on 4 5 d partially mplexity of 5 1. It further course see
Students will learn the between user and ad processes, memory BI-ADW.1 BI-AG1.21 The course covers develops the knowle algoriti BI-AG2.21 This course, presen delves into advance BI-ALO	a internal structure of the UNIX operating system, with the administration of its basic subsystems and with the security principles. They iministrator roles. They will get theoretical and practical knowledge of user management and administration, of users access rights, a network services and remote access, and in the areas of system deployment and virtualization. In the labs, they will verify the knowledge form practice. Windows Administration This course is presented in Czech. However, there is an English variant in the program Informatics (B1801 / 4753). Algorithms and Graphs 1 the basics of efficient algorithm design, data structures, and graph theory, belonging to the core knowledge of every computing curve dage from the course BI-DML.21, in which students acquire the knowledge and skills in combinatorics necessary for evaluating the hms. The course also follows up knowledge from BI-MA1.21, the practical usage of asymptotic mathematics, in particular, the asymptotic mathematics, in particular, the asymptotic mathematics and amortized complexity analysis. It also includes a very light introduction to approximation algorithms. For Eng BIE-AG2.21. Algebra and Logic The course extends and deepens the study of topics touched upon in the basic course in logic.	will understand the file systems, disk s lowledge from the le Z,ZK rriculum. It links an time and space co mptotic notation. Z,ZK y course BI-AG1.2' lish version of the o	differences subsystems, ectures on 4 5 d partially omplexity of 5 1. It further course see 4

BI-ANG1	English Language Examination without Preparatory Courses	Z,ZK	2
BI-ANGK	English language, contact preparation for the B2 level exam	Z	2
	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 ess rate set at 70%80% and over in BOTH tests means ORAL EXAM ONLY (no written part). Requirements will be specified by indi		
	class of the term.		ing the met
BI-APJ	Aplication Programming in Java	Z,ZK	4
	This course is presented in Czech. Advanced technologies in Java.		
BI-APS.21	Architectures of Computer Systems	Z,ZK	5
	n the construction principles of internal architecture of computers with universal processors at the level of machine instructions. Spec n processing and on the memory hierarchy. Students will understand the basic concepts of RISC and CISC architectures and the princ		
	r processors, but also in superscalar processors that can execute multiple instructions in one cycle, while ensuring the correctness of		-
	se further elaborates the principles and architectures of shared memory multiprocessor and multicore systems and the memory cohe	•	
	systems.		
BI-ARD	Interactive applications on Arduino	KZ	4
	ned 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	-	
	Software Engineering students.		
BI-ASB.21	Applied Network Security	Z,ZK	5
	rse is to introduce selected topics from computer networks in terms of cybersecurity. These topics extend the basic knowledge gaine		
security applicati	ions like the public key infrastructure, encrypted network protocols, link and network layer security or wireless networks. After finishing knowledge of security applications in computer networks.	g the course stude	nt will get
BI-AVI.21	Algorithms visually	Z.ZK	4
	HIGOITTING VISUAITY ments other algorithm courses at FIT. It brings knowledge about particular important algorithms from different fields of the computer sc	ı ' I	
	ed in BI-AG1 and BI-AG2. A wide scope of covered subject is made possible due to using visualization bz Algovision (www.algovision.org&l		
	that make understanding the principles of algorithms easy.		
BI-AWD.21	Web and Database Server Administration	Z,ZK	5
-	equainted with the administration of database and web servers and services. They will be able to install, configure, operate, test, and l		
BI-BAP.21	rice systems. The principles will be demonstrated on the PostgreSQL relational database engine and Apache will be used as an exam Bachelor Thesis	Z	14
BI-BAF.21 BI-BEK.21	Secure Code	Z,ZK	5
	arn how to assess security risks and how to take them into account in the design phase of their own code and solutions. After getting fa	, [,] ,	-
	gain practical experience with running programs with reduced privileges and methods of specifying these privileges, since not every		-
	ileges. Dangers inherent in buffer overflows will be practically demonstrated. Students will be introduced to the principles of securing		
-	database systems, web, remote procedure calls, and sockets in general. The module concludes with Denial of Service attacks and th	e defense against	them.
BI-BIG.21	DB Technologies for Big Data	KZ	5
Students will be int	roduced into the field of Big Data processing where nonrelational (NoSQL) database engines are typically used today. The course is f	ocused practically	5 so that after
Students will be int finishing the course		ocused practically withod of data proce	5 so that after essing (data
Students will be int finishing the course	roduced into the field of Big Data processing where nonrelational (NoSQL) database engines are typically used today. The course is file students were able to choose suitable tools (mostly open source) and techniques, design and implement a simplest reproducible me	ocused practically withod of data proce	5 so that after essing (data
Students will be int finishing the course collection, transforr BI-BLE	roduced into the field of Big Data processing where nonrelational (NoSQL) database engines are typically used today. The course is find e students were able to choose suitable tools (mostly open source) and techniques, design and implement a simplest reproducible memation/aggregation, presentation). Students get acquainted with various architectures for processing and storing big data. A theoretic of individual technologies will be supplemented with specific examples from practice.	ocused practically ethod of data proce al foundation and p Z,ZK	5 so that after essing (data presentation 4
Students will be int finishing the course collection, transforr BI-BLE The course exten	roduced into the field of Big Data processing where nonrelational (NoSQL) database engines are typically used today. The course is file students were able to choose suitable tools (mostly open source) and techniques, design and implement a simplest reproducible me mation/aggregation, presentation). Students get acquainted with various architectures for processing and storing big data. A theoretic of individual technologies will be supplemented with specific examples from practice. Blender ds knowledge of opensource program Blender from BI-MGA (Multimedia and Graphics Applications) course. It is intended for those i	ocused practically ethod of data proce al foundation and p Z,ZK nterested in 3D gra	5 so that after essing (data presentation 4 aphics and
Students will be int finishing the course collection, transforr BI-BLE The course exten animation. It c	roduced into the field of Big Data processing where nonrelational (NoSQL) database engines are typically used today. The course is file students were able to choose suitable tools (mostly open source) and techniques, design and implement a simplest reproducible me mation/aggregation, presentation). Students get acquainted with various architectures for processing and storing big data. A theoretic of individual technologies will be supplemented with specific examples from practice. Blender ds knowledge of opensource program Blender from BI-MGA (Multimedia and Graphics Applications) course. It is intended for those i offers a complete and practically oriented introduction to Blender environment. Students may continue to BI-PGA (Programming graph	ocused practically ethod of data proce al foundation and p Z,ZK nterested in 3D gra	5 so that after essing (data presentation 4 aphics and
Students will be int finishing the course collection, transforr BI-BLE The course exten animation. It of BI-BPR.21	roduced into the field of Big Data processing where nonrelational (NoSQL) database engines are typically used today. The course is file students were able to choose suitable tools (mostly open source) and techniques, design and implement a simplest reproducible me nation/aggregation, presentation). Students get acquainted with various architectures for processing and storing big data. A theoretic of individual technologies will be supplemented with specific examples from practice. Blender ds knowledge of opensource program Blender from BI-MGA (Multimedia and Graphics Applications) course. It is intended for those i offers a complete and practically oriented introduction to Blender environment. Students may continue to BI-PGA (Programming graph Bachelor project	coused practically ethod of data proce al foundation and p Z,ZK nterested in 3D gra nics applications) c Z	5 so that after essing (data presentation 4 aphics and course. 1
Students will be int finishing the course collection, transforr BI-BLE The course exten animation. It c BI-BPR.21 1. At the beginnin	roduced into the field of Big Data processing where nonrelational (NoSQL) database engines are typically used today. The course is file students were able to choose suitable tools (mostly open source) and techniques, design and implement a simplest reproducible me mation/aggregation, presentation). Students get acquainted with various architectures for processing and storing big data. A theoretic of individual technologies will be supplemented with specific examples from practice. Blender ds knowledge of opensource program Blender from BI-MGA (Multimedia and Graphics Applications) course. It is intended for those i offers a complete and practically oriented introduction to Blender environment. Students may continue to BI-PGA (Programming graph	coused practically ethod of data proce al foundation and p Z,ZK nterested in 3D gra nics applications) c Z partial tasks that he	5 so that after essing (data presentation 4 aphics and course. 1 e / she will
Students will be int finishing the course collection, transforr BI-BLE The course exten animation. It c BI-BPR.21 1. At the beginnin perform during the external supervisor	roduced into the field of Big Data processing where nonrelational (NoSQL) database engines are typically used today. The course is file students were able to choose suitable tools (mostly open source) and techniques, design and implement a simplest reproducible me mation/aggregation, presentation). Students get acquainted with various architectures for processing and storing big data. A theoretic of individual technologies will be supplemented with specific examples from practice. Blender ds knowledge of opensource program Blender from BI-MGA (Multimedia and Graphics Applications) course. It is intended for those i offers a complete and practically oriented introduction to Blender environment. Students may continue to BI-PGA (Programming graph Bachelor project g of the semester, the student reserves the topic of the bachelor's thesis and connects with the supervisor. He / she will arrange the semester to process the assignment. If he completes these tasks, the supervisor will award him a credit from the subject BI-BRR at t enters the information on granting the credit using the form "Granting credit from the external supervisor of the final thesis" (http://fit.cvu	coused practically athod of data proce al foundation and p Z,ZK nterested in 3D gra nics applications) c Z partial tasks that he he end of the seme t.cz/student/studijni	5 so that after essing (data presentation 4 aphics and course. 1 e / she will ester. 2. The i/formulare).
Students will be int finishing the course collection, transforr BI-BLE The course exten animation. It of BI-BPR.21 1. At the beginnin perform during the external supervisor The completed and	roduced into the field of Big Data processing where nonrelational (NoSQL) database engines are typically used today. The course is file students were able to choose suitable tools (mostly open source) and techniques, design and implement a simplest reproducible me mation/aggregation, presentation). Students get acquainted with various architectures for processing and storing big data. A theoretic of individual technologies will be supplemented with specific examples from practice. Blender ds knowledge of opensource program Blender from BI-MGA (Multimedia and Graphics Applications) course. It is intended for those i offers a complete and practically oriented introduction to Blender environment. Students may continue to BI-PGA (Programming graph Bachelor project g of the semester, the student reserves the topic of the bachelor's thesis and connects with the supervisor. He / she will arrange the presenter to process the assignment. If he completes these tasks, the supervisor will award him a credit from the subject BI-BRR at t enters the information on granting the credit using the form "Granting credit from the external supervisor of the final thesis" (http://fit.cvu d signed form must be delivered in person or by email to the SZZ coordinator, who will arrange for the credit to be granted. 3. If the top	coused practically ethod of data proce al foundation and p Z,ZK nterested in 3D granics applications) c Z partial tasks that he he end of the sement.cz/student/studijnio co of the work that	5 so that after essing (data presentation 4 aphics and course. 1 e / she will ester. 2. The i/formulare). the student
Students will be int finishing the course collection, transforr BI-BLE The course exten animation. It of BI-BPR.21 1. At the beginnin perform during the external supervisor The completed and	roduced into the field of Big Data processing where nonrelational (NoSQL) database engines are typically used today. The course is file students were able to choose suitable tools (mostly open source) and techniques, design and implement a simplest reproducible me mation/aggregation, presentation). Students get acquainted with various architectures for processing and storing big data. A theoretic of individual technologies will be supplemented with specific examples from practice. Blender ds knowledge of opensource program Blender from BI-MGA (Multimedia and Graphics Applications) course. It is intended for those i offers a complete and practically oriented introduction to Blender environment. Students may continue to BI-PGA (Programming graph Bachelor project g of the semester, the student reserves the topic of the bachelor's thesis and connects with the supervisor. He / she will arrange the presenter to process the assignment. If he completes these tasks, the supervisor will award him a credit from the subject BI-BRR at t enters the information on granting the credit using the form "Granting credit from the external supervisor of the final thesis" (http://fit.cvu d signed form must be delivered in person or by email to the SZZ coordinator, who will arrange for the credit to be granted. 3. If the top mulated more generally, the tasks assigned to him by the supervisor for the semester should be aimed primarily at fine-tuning the assign	coused practically ethod of data proce al foundation and p Z,ZK nterested in 3D granics applications) c Z partial tasks that he he end of the sement.cz/student/studijnio co of the work that	5 so that after essing (data presentation 4 aphics and course. 1 e / she will ester. 2. The i/formulare). the student
Students will be int finishing the course collection, transforr BI-BLE The course exten animation. It of BI-BPR.21 1. At the beginnin perform during the external supervisor The completed and has reserved is forr	roduced into the field of Big Data processing where nonrelational (NoSQL) database engines are typically used today. The course is file students were able to choose suitable tools (mostly open source) and techniques, design and implement a simplest reproducible me mation/aggregation, presentation). Students get acquainted with various architectures for processing and storing big data. A theoretic of individual technologies will be supplemented with specific examples from practice. Blender ds knowledge of opensource program Blender from BI-MGA (Multimedia and Graphics Applications) course. It is intended for those i offers a complete and practically oriented introduction to Blender environment. Students may continue to BI-PGA (Programming graph Bachelor project g of the semester, the student reserves the topic of the bachelor's thesis and connects with the supervisor. He / she will arrange the presenter to process the assignment. If he completes these tasks, the supervisor will award him a credit from the subject BI-BRR at t enters the information on granting the credit using the form "Granting credit from the external supervisor of the final thesis" (http://fit.cvu d signed form must be delivered in person or by email to the SZZ coordinator, who will arrange for the credit to be granted. 3. If the top	coused practically ethod of data proce al foundation and p Z,ZK nterested in 3D granics applications) c Z partial tasks that he he end of the sement.cz/student/studijnio co of the work that	5 so that after essing (data presentation 4 aphics and course. 1 e / she will ester. 2. The i/formulare). the student
Students will be int finishing the course collection, transforr BI-BLE The course exten animation. It of BI-BPR.21 1. At the beginnin perform during the external supervisor The completed and has reserved is forr BI-CCN	roduced into the field of Big Data processing where nonrelational (NoSQL) database engines are typically used today. The course is file students were able to choose suitable tools (mostly open source) and techniques, design and implement a simplest reproducible me mation/aggregation, presentation). Students get acquainted with various architectures for processing and storing big data. A theoretic of individual technologies will be supplemented with specific examples from practice. Blender ds knowledge of opensource program Blender from BI-MGA (Multimedia and Graphics Applications) course. It is intended for those i offers a complete and practically oriented introduction to Blender environment. Students may continue to BI-PGA (Programming graph Bachelor project g of the semester, the student reserves the topic of the bachelor's thesis and connects with the supervisor. He / she will arrange the enters the information on granting the credit using the form "Granting credit from the external supervisor of the final thesis" (http://fit.cvu d signed form must be delivered in person or by email to the SZZ coordinator, who will arrange for the credit to be granted. 3. If the top mulated more generally, the tasks assigned to him by the supervisor for the semester should be aimed primarily at fine-tuning the assig can be supplemented and approved at the end of the semester.	coused practically athod of data proce al foundation and p Z,ZK nterested in 3D gra nics applications) c Z partial tasks that he he end of the seme t.cz/student/studijni pic of the work that grament so that the Z,ZK	5 so that after essing (data poresentation 4 aphics and course. 1 e / she will ester. 2. The i/formulare). the student assignment 5
Students will be int finishing the course collection, transforr BI-BLE The course exten animation. It of BI-BPR.21 1. At the beginnin perform during the external supervisor The completed and has reserved is forr BI-CCN This is an introdu understa	roduced into the field of Big Data processing where nonrelational (NoSQL) database engines are typically used today. The course is file students were able to choose suitable tools (mostly open source) and techniques, design and implement a simplest reproducible memation/aggregation, presentation). Students get acquainted with various architectures for processing and storing big data. A theoretic of individual technologies will be supplemented with specific examples from practice. Blender ds knowledge of opensource program Blender from BI-MGA (Multimedia and Graphics Applications) course. It is intended for those i offers a complete and practically oriented introduction to Blender environment. Students may continue to BI-PGA (Programming graph Bachelor project g of the semester, the student reserves the topic of the bachelor's thesis and connects with the supervisor. He / she will arrange the presenter to process the assignment. If he completes these tasks, the supervisor will award him a credit from the subject BI-BPR at t enters the information on granting the credit using the form "Granting credit from the external supervisor of the final thesis" (http://fit.cvu d signed form must be delivered in person or by email to the SZZ coordinator, who will arrange for the credit to be granted. 3. If the top mulated more generally, the tasks assigned to him by the supervisor for the semester should be aimed primarily at fine-tuning the assig can be supplemented and approved at the end of the semester. Compiler Construction uctory class on compiler construction for bachelor students in computer science. The goal of the class is to introduce basic principles and the design and implementation of programming languages. Seeing and actually understanding self-compilation is the overarching	coused practically athod of data proce al foundation and p Z,ZK interested in 3D gra- nics applications) c Z partial tasks that he he end of the seme t.cz/student/studijni pic of the work that griment so that the Z,ZK of compilers for stri- theme of the class	5 so that after essing (data presentation 4 aphics and course. 1 e / she will ester. 2. The i/formulare). t the student assignment 5 udents to s.
Students will be int finishing the course collection, transforr BI-BLE The course exten animation. It of BI-BPR.21 1. At the beginnin perform during the external supervisor The completed and has reserved is forr BI-CCN This is an introdu understa BI-CS1	roduced into the field of Big Data processing where nonrelational (NoSQL) database engines are typically used today. The course is file students were able to choose suitable tools (mostly open source) and techniques,design and implement a simplest reproducible memation/aggregation, presentation). Students get acquainted with various architectures for processing and storing big data. A theoretic of individual technologies will be supplemented with specific examples from practice. Blender ds knowledge of opensource program Blender from BI-MGA (Multimedia and Graphics Applications) course. It is intended for those i offers a complete and practically oriented introduction to Blender environment. Students may continue to BI-PGA (Programming graph Bachelor project g of the semester, the student reserves the topic of the bachelor's thesis and connects with the supervisor. He / she will arrange the semester to process the assignment. If he completes these tasks, the supervisor will award him a credit from the subject BI-BPR at t enters the information on granting the credit using the form "Granting credit from the external supervisor of the final thesis" (http://fit.cvu/d signed form must be delivered in person or by email to the SZZ coordinator, who will arrange for the credit to be granted. 3. If the top mulated more generally, the tasks assigned to him by the supervisor for the semester should be aimed primarily at fine-tuning the assigned to him by the supervisor for the semester. Compiler Construction uctory class on compiler construction for bachelor students in computer science. The goal of the class is to introduce basic principles and the design and implementation of programming languages. Seeing and actually understanding self-compilation is the overarching Programming in C#	coused practically athod of data proce al foundation and p Z,ZK interested in 3D gra- nics applications) c Z partial tasks that he he end of the seme t.cz/student/studijni pic of the work that griment so that the Z,ZK of compilers for stat theme of the class KZ	5 so that after essing (data presentation 4 aphics and course. 1 e / she will ester. 2. The i/formulare). t the student assignment 5 udents to s. 4
Students will be int finishing the course collection, transforr BI-BLE The course exten animation. It of BI-BPR.21 1. At the beginnin perform during the external supervisor The completed and has reserved is forr BI-CCN This is an introdu understa BI-CS1 The goal of the course	roduced into the field of Big Data processing where nonrelational (NoSQL) database engines are typically used today. The course is file students were able to choose suitable tools (mostly open source) and techniques, design and implement a simplest reproducible memation/aggregation, presentation). Students get acquainted with various architectures for processing and storing big data. A theoretic of individual technologies will be supplemented with specific examples from practice. Blender ds knowledge of opensource program Blender from Bl-MGA (Multimedia and Graphics Applications) course. It is intended for those in offers a complete and practically oriented introduction to Blender environment. Students may continue to BI-PGA (Programming graph Bachelor project g of the semester, the student reserves the topic of the bachelor's thesis and connects with the supervisor. He / she will arrange the semester to process the assignment. If he completes these tasks, the supervisor will award him a credit from the subject BI-BPR at t enters the information on granting the credit using the form "Granting credit from the external supervisor of the final thesis" (http://fit.cvu d signed form must be delivered in person or by email to the SZZ coordinator, who will arrange for the credit to be granted. 3. If the top mulated more generally, the tasks assigned to him by the supervisor for the semester should be aimed primarily at fine-tuning the assig can be supplemented and approved at the end of the semester. Compiler Construction uctory class on compiler construction for bachelor students in computer science. The goal of the class is to introduce basic principles and the design and implementation of programming languages. Seeing and actually understanding self-compilation is the overarching Programming in C# urse is to introduce .NET Framework as a multi-language development platform. Then, programming language C#, its fundamental completes is to introduce as a multi-language development platform. Then, programming lang	coused practically athod of data proce al foundation and p Z,ZK interested in 3D gra- nics applications) c Z partial tasks that he he end of the seme t.cz/student/studijni pic of the work that griment so that the Z,ZK of compilers for sti- theme of the class KZ ponstruction, types c	5 so that after essing (data presentation 4 aphics and course. 1 e / she will ester. 2. The i/formulare). t the student assignment 5 udents to s. 4 of variables,
Students will be int finishing the course collection, transforr BI-BLE The course exten animation. It of BI-BPR.21 1. At the beginnin perform during the external supervisor The completed and has reserved is forr BI-CCN This is an introdu understa BI-CS1 The goal of the cou- operators, arrays	roduced into the field of Big Data processing where nonrelational (NoSQL) database engines are typically used today. The course is file students were able to choose suitable tools (mostly open source) and techniques, design and implement a simplest reproducible memation/aggregation, presentation). Students get acquainted with various architectures for processing and storing big data. A theoretic of individual technologies will be supplemented with specific examples from practice. Blender ds knowledge of opensource program Blender from BI-MGA (Multimedia and Graphics Applications) course. It is intended for those i offers a complete and practically oriented introduction to Blender environment. Students may continue to BI-PGA (Programming graph Bachelor project g of the semester, the student reserves the topic of the bachelor's thesis and connects with the supervisor. He / she will arrange the j semester to process the assignment. If he completes these tasks, the supervisor will award him a credit from the subject BI-BPR at t enters the information on granting the credit using the form "Granting credit from the external supervisor of the final thesis" (http://fit.cvu d signed form must be delivered in person or by email to the SZZ coordinator, who will arrange for the credit to be granted. 3. If the top mulated more generally, the tasks assigned to him by the supervisor for the semester should be aimed primarily at fine-tuning the assig can be supplemented and approved at the end of the class is to introduce basic principles and the design and implementation of programming languages. Seeing and actually understanding self-compilation is the overarching Programming in C# 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 definitions	coused practically athod of data proce al foundation and p Z,ZK interested in 3D gra- nics applications) c Z partial tasks that he he end of the seme t.cz/student/studijni pic of the work that griment so that the Z,ZK of compilers for sti- theme of the class KZ ponstruction, types c inition and class in	5 so that after essing (data presentation 4 aphics and course. 1 e / she will ester. 2. The i/formulare). t the student assignment 5 udents to s. 4 of variables, istancing,
Students will be int finishing the course collection, transforr BI-BLE The course exten animation. It of BI-BPR.21 1. At the beginnin perform during the external supervisor The completed and has reserved is forr BI-CCN This is an introdu understa BI-CS1 The goal of the cou- operators, arrays	roduced into the field of Big Data processing where nonrelational (NoSQL) database engines are typically used today. The course is file students were able to choose suitable tools (mostly open source) and techniques, design and implement a simplest reproducible memation/aggregation, presentation). Students get acquainted with various architectures for processing and storing big data. A theoretic of individual technologies will be supplemented with specific examples from practice. Blender ds knowledge of opensource program Blender from Bl-MGA (Multimedia and Graphics Applications) course. It is intended for those in offers a complete and practically oriented introduction to Blender environment. Students may continue to BI-PGA (Programming graph Bachelor project g of the semester, the student reserves the topic of the bachelor's thesis and connects with the supervisor. He / she will arrange the semester to process the assignment. If he completes these tasks, the supervisor will award him a credit from the subject BI-BPR at t enters the information on granting the credit using the form "Granting credit from the external supervisor of the final thesis" (http://fit.cvu d signed form must be delivered in person or by email to the SZZ coordinator, who will arrange for the credit to be granted. 3. If the top mulated more generally, the tasks assigned to him by the supervisor for the semester should be aimed primarily at fine-tuning the assig can be supplemented and approved at the end of the semester. Compiler Construction uctory class on compiler construction for bachelor students in computer science. The goal of the class is to introduce basic principles and the design and implementation of programming languages. Seeing and actually understanding self-compilation is the overarching Programming in C# urse is to introduce .NET Framework as a multi-language development platform. Then, programming language C#, its fundamental completes is to introduce as a multi-language development platform. Then, programming lang	coused practically athod of data proce al foundation and p Z,ZK interested in 3D gra- nics applications) c Z partial tasks that he he end of the seme t.cz/student/studijni pic of the work that griment so that the Z,ZK of compilers for sti- theme of the class KZ ponstruction, types c inition and class in	5 so that after essing (data presentation 4 aphics and course. 1 e / she will ester. 2. The i/formulare). t the student assignment 5 udents to s. 4 of variables, istancing,
Students will be int finishing the course collection, transforr BI-BLE The course exten animation. It of BI-BPR.21 1. At the beginnin perform during the external supervisor The completed and has reserved is forr BI-CCN This is an introdu understa BI-CS1 The goal of the cou- operators, arrays constructors, meth BI-CS2	roduced into the field of Big Data processing where nonrelational (NoSQL) database engines are typically used today. The course is fe e students were able to choose suitable tools (mostly open source) and techniques, design and implement a simplest reproducible me nation/aggregation, presentation). Students get acquainted with various architectures for processing and storing big data. A theoretic of individual technologies will be supplemented with specific examples from practice. Blender ds knowledge of opensource program Blender from BI-MGA (Multimedia and Graphics Applications) course. It is intended for those is offers a complete and practically oriented introduction to Blender environment. Students may continue to BI-PGA (Programming graph Bachelor project g of the semester, the student reserves the topic of the bachelor's thesis and connects with the supervisor. He / she will arrange the semester to process the assignment. If he completes these tasks, the supervisor will award him a credit from the subject BI-BFR at t enters the information on granting the credit using the form "Granting credit from the external supervisor of the final thesis" (http://fit.cvu d signed form must be delivered in person or by email to the SZZ coordinator, who will arrange for the credit to be granted. 3. If the top mulated more generally, the tasks assigned to him by the supervisor for the semester. Compiler Construction uctory class on compiler construction for bachelor students in computer science. The goal of the class is to introduce basic principles and the design and implementation of programming languages. Seeing and actually understanding self-compilation is the overarching Programming in C# 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 tods, properties, static members, Garbage Collector, inheritanc	Coursed practically athod of data process al foundation and p Z,ZK interested in 3D gra- nics applications) of Z partial tasks that he he end of the seme t.cz/student/studijni bic of the work that griment so that the Z,ZK of compilers for sti- theme of the class KZ ponstruction, types of inition and class in and exception pro-	5 so that after essing (data presentation 4 aphics and course. 1 e / she will ester. 2. The i/formulare). the student assignment 5 udents to s. 4 of variables, istancing, cessing, as 4
Students will be int finishing the course collection, transforr BI-BLE The course exten animation. It of BI-BPR.21 1. At the beginnin perform during the external supervisor The completed and has reserved is forr BI-CCN This is an introdu understa BI-CS1 The goal of the cou operators, arrays constructors, meth BI-CS2 The C# language a	roduced into the field of Big Data processing where nonrelational (NoSQL) database engines are typically used today. The course is fe e students were able to choose suitable tools (mostly open source) and techniques, design and implement a simplest reproducible me nation/aggregation, presentation). Students get acquainted with various architectures for processing and storing big data. A theoretic of individual technologies will be supplemented with specific examples from practice. Blender ds knowledge of opensource program Blender from BI-MGA (Multimedia and Graphics Applications) course. It is intended for those i offers a complete and practically oriented introduction to Blender environment. Students may continue to BI-PGA (Programming graph Bachelor project g of the semester, the student reserves the topic of the bachelor's thesis and connects with the supervisor. He / she will arrange the semester to process the assignment. If he completes these tasks, the supervisor will award him a credit from the subject BI-BPR at t enters the information on granting the credit using the form "Granting credit from the external supervisor of the final thesis" (http://fit.cvu d signed form must be delivered in person or by email to the SZZ coordinator, who will arrange for the credit to be granted. 3. If the top mulated more generally, the tasks assigned to him by the supervisor for the semester should be aimed primarily at fine-tuning the assign can be supplemented and approved at the end of the semester. Compiler Construction uctory class on compiler construction for bachelor students in computer science. The goal of the class is to introduce basic principles and the design and implementation of programming languages. Seeing and actually understanding self-compilation is the overarching Programming in C# urse is to introduce .NET Framework as a multi-language development platform. Then, programming language C#, its fundamental cc s, loops, definitions and calls of functions will be discussed. Attention is focused on the	coursed practically athod of data proces al foundation and p Z,ZK interested in 3D granics applications) c Z partial tasks that he he end of the sement.cz/student/studijnio pic of the work that gmeent so that the Corpilers for struction, types c inition and class in and exception processor KZ onstruction, types c inition and class in and exception processor	5 so that after essing (data presentation 4 aphics and course. 1 e / she will ester. 2. The i/formulare). the student assignment 5 udents to s. 4 of variables, istancing, cessing, as 4 tudents will
Students will be int finishing the course collection, transforr BI-BLE The course exten animation. It of BI-BPR.21 1. At the beginnin perform during the external supervisor The completed and has reserved is forr BI-CCN This is an introdu understa BI-CS1 The goal of the cou operators, arrays constructors, meth BI-CS2 The C# language a get to know object	roduced into the field of Big Data processing where nonrelational (NoSQL) database engines are typically used today. The course is f e students were able to choose suitable tools (mostly open source) and techniques, design and implement a simplest reproducible me mation/aggregation, presentation). Students get acquainted with various architectures for processing and storing big data. A theoretic of individual technologies will be supplemented with specific examples from practice. Blender ds knowledge of opensource program Blender from BI-MGA (Multimedia and Graphics Applications) course. It is intended for those i offers a complete and practically oriented introduction to Blender environment. Students may continue to BI-PGA (Programming graph Bachelor project g of the semester, the student reserves the topic of the bachelor's thesis and connects with the supervisor. He / she will arrange the p semester to process the assignment. If he completes these tasks, the supervisor will award him a credit from the subject BI-BPR at t enters the information on granting the credit using the form "Granting credit from the external supervisor of the final thesis" (http://fit.cvu d signed form must be delivered in person or by email to the SZZ coordinator, who will arrange for the credit to be granted. 3. If the top mulated more generally, the tasks assigned to him by the supervisor for the semester should be aimed primarily at fine-tuning the assig can be supplemented and approved at the end of the semester. Compiler Construction uctory class on compiler construction for bachelor students in computer science. The goal of the class is to introduce basic principles and the design and implementation of programming 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 toods, properties, static members, Garbage Collector, inheritance and polymorphism, collections, del	coused practically athod of data proces al foundation and p Z,ZK interested in 3D granics applications) c Z partial tasks that he he end of the sement.cz/student/studijinio pic of the work that gmment so that the C,ZK of compilers for struction, types c inition and class in and exception procession KZ postruction, types c inition and class in and exception procession	5 so that after essing (data presentation 4 aphics and course. 1 e / she will ester. 2. The i/formulare). the student assignment 5 udents to s. 4 of variables, istancing, cessing, as 4 tudents will INQ - a set
Students will be int finishing the course collection, transforr BI-BLE The course exten animation. It of BI-BPR.21 1. At the beginnin perform during the external supervisor The completed and has reserved is forr BI-CCN This is an introdu understa BI-CS1 The goal of the cou operators, arrays constructors, meth BI-CS2 The C# language a get to know object of features for que	roduced into the field of Big Data processing where nonrelational (NoSQL) database engines are typically used today. The course is f a students were able to choose suitable tools (mostly open source) and techniques, design and implement a simplest reproducible me nation/aggregation, presentation). Students get acquainted with various architectures for processing and storing big data. A theoretic of individual technologies will be supplemented with specific examples from practice. Blender ds knowledge of opensource program Blender from BI-MGA (Multimedia and Graphics Applications) course. It is intended for those i offers a complete and practically oriented introduction to Blender environment. Students may continue to BI-PGA (Programming graph Bachelor project g of the semester, the student reserves the topic of the bachelor's thesis and connects with the supervisor. He / she will arrange the semester to process the assignment. If he completes these tasks, the supervisor will award him a credit from the subject BI-BPR at t enters the information on granting the credit using the form "Granting credit from the external supervisor of the final thesis" (http://fit.cvu d signed form must be delivered in person or by email to the SZZ coordinator, who will arrange for the credit to be granted. 3. If the top mulated more generally, the tasks assigned to him by the supervisor for the semester should be aimed primarily at fine-tuning the assignent design and implementation of programming languages. Seeing and actually understanding self-compilation is the overarching Programming in C# urse is to introduce. NET Framework as a multi-language development platform. Then, programming language C#, its fundamental cc s, loops, definitions and calls of functions will be discussed. Attention is focused on the object oriented programming in C# - class def loods, properties, static members, Garbage Collector, inheritance and polymorphism, collections, delegates, and generics. Debugging well as work with files are	coused practically athod of data proces al foundation and p Z,ZK interested in 3D granics applications) c Z partial tasks that he he end of the sement.cz/student/studijnio pic of the work that gmeent so that the Compilers for struction, types c inition and class in and exception procession KZ postruction, types c inition and class in and exception procession KZ postruction, types c in the subject such as LI INQ to Objects, LII	5 so that after essing (data presentation 4 aphics and course. 1 e / she will ester. 2. The i/formulare). the student assignment 5 udents to s. 4 of variables, istancing, cessing, as 4 tudents will INQ - a set NQ to XML
Students will be int finishing the course collection, transforr BI-BLE The course exten animation. It of BI-BPR.21 1. At the beginnin perform during the external supervisor The completed and has reserved is forr BI-CCN This is an introdu understa BI-CS1 The goal of the cou operators, arrays constructors, meth BI-CS2 The C# language a get to know object of features for que and LINQ to SQL	roduced into the field of Big Data processing where nonrelational (NoSQL) database engines are typically used today. The course is f e students were able to choose suitable tools (mostly open source) and techniques, design and implement a simplest reproducible me mation/aggregation, presentation). Students get acquainted with various architectures for processing and storing big data. A theoretic of individual technologies will be supplemented with specific examples from practice. Blender ds knowledge of opensource program Blender from BI-MGA (Multimedia and Graphics Applications) course. It is intended for those i offers a complete and practically oriented introduction to Blender environment. Students may continue to BI-PGA (Programming graph Bachelor project g of the semester, the student reserves the topic of the bachelor's thesis and connects with the supervisor. He / she will arrange the p semester to process the assignment. If he completes these tasks, the supervisor will award him a credit from the subject BI-BPR at t enters the information on granting the credit using the form "Granting credit from the external supervisor of the final thesis" (http://fit.cvu d signed form must be delivered in person or by email to the SZZ coordinator, who will arrange for the credit to be granted. 3. If the top mulated more generally, the tasks assigned to him by the supervisor for the semester should be aimed primarily at fine-tuning the assig can be supplemented and approved at the end of the semester. Compiler Construction uctory class on compiler construction for bachelor students in computer science. The goal of the class is to introduce basic principles and the design and implementation of programming 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 toods, properties, static members, Garbage Collector, inheritance and polymorphism, collections, del	coused practically athod of data proces al foundation and p Z,ZK interested in 3D granics applications) c Z partial tasks that he he end of the sement.cz/student/studijnio pic of the work that gmeent so that the Compilers for state theme of the class KZ onstruction, types c inition and class in and exception procession KZ not platform. The state INQ to Objects, LI using domain-special	5 so that after essing (data presentation 4 aphics and course. 1 e / she will ester. 2. The i/formulare). the student assignment 5 udents to s. 4 of variables, istancing, ccessing, as 4 tudents will INQ - a set NQ to XML ific objects
Students will be int finishing the course collection, transforr BI-BLE The course exten animation. It of BI-BPR.21 1. At the beginnin perform during the external supervisor The completed and has reserved is forr BI-CCN This is an introdu understa BI-CS1 The goal of the cou- operators, arrays constructors, meth BI-CS2 The C# language a get to know object of features for que and LINQ to SQL (ORM). This part o	roduced into the field of Big Data processing where nonrelational (NoSQL) database engines are typically used today. The course is fe e students were able to choose suitable tools (mostly open source) and techniques, design and implement a simplest reproducible me mation/aggregation, presentation). Students get acquainted with various architectures for processing and storing big data. A theoretic of individual technologies will be supplemented with specific examples from practice. Blender ds knowledge of opensource program Blender from BI-MGA (Multimedia and Graphics Applications) course. It is intended for those i ffers a complete and practically oriented introduction to Blender environment. Students may continue to BI-PGA (Programming graph Bachelor project g of the semester, the student reserves the topic of the bachelor's thesis and connects with the supervisor. He / she will arrange the semester to process the assignment. If he completes these tasks, the supervisor will award him a credit from the subject BI-BPR at t enters the information on granting the credit using the form "Granting credit from the external supervisor of the final thesis" (http://fit.cvu d signed form must be delivered in person or by email to the SZZ coordinator, who will arrange for the credit to be granted. 3. If the top mulated more generally, the tasks assigned to him by the supervisor for the semester should be aimed primarily at fine-tuning the assis can be supplemented and approved at the end of the semester. Compiler Construction uctory class on compiler construction for bachelor students in computer science. The goal of the class is to introduce basic principles and the design and implementation of programming languages. Seeing and actually understanding self-compilation is the overarching Programming in C# s, loops, definitions and calls of functions will be discussed. Attention is focused on the object oriented programming in C# - class def toods, properties, static members, Garbage Collector, inheritance and polymorphi	ocused practically athod of data proce al foundation and p Z,ZK Interested in 3D gra- nics applications) c Z partial tasks that he he end of the seme t.cz/student/studijni bic of the work that gnment so that the Z,ZK of compilers for str theme of the class KZ onstruction, types c inition and class in and exception proc KZ soft platform. The st nologies such as L INQ to Objects, LI ssing domain-speci I, Storage Model ar	5 so that after essing (data presentation 4 aphics and course. 1 e / she will ester. 2. The i/formulare). the student assignment 5 udents to s. 4 of variables, istancing, ccessing, as 4 tudents will INQ - a set NQ to XML ific objects
Students will be int finishing the course collection, transforr BI-BLE The course exten animation. It of BI-BPR.21 1. At the beginnin perform during the external supervisor The completed and has reserved is forr BI-CCN This is an introdu understa BI-CS1 The goal of the cou- operators, arrays constructors, meth BI-CS2 The C# language a get to know object of features for que and LINQ to SQL (ORM). This part of BI-CS3	roduced into the field of Big Data processing where nonrelational (NoSQL) database engines are typically used today. The course is fo e students were able to choose suitable tools (mostly open source) and techniques, design and implement a simplest reproducible me mation/aggregation, presentation). Students get acquainted with various architectures for processing and storing big data. A theoretic of individual technologies will be supplemented with specific examples from practice. Blender ds knowledge of opensource program Blender from BI-MGA (Multimedia and Graphics Applications) course. It is intended for those i infers a complete and practically oriented introduction to Blender environment. Students may continue to BI-PGA (Programming graph Bachelor project g of the semester, the student reserves the topic of the bachelor's thesis and connects with the supervisor. He / she will arrange the semester to process the assignment. If he completes these tasks, the supervisor will award him a credit from the subject BI-BPR at t enters the information on granting the credit using the form "Granting credit from the external supervisor of the final thesis" (http://fit.cvu signed form must be delivered in person or by email to the SZZ coordinator, who will arrange for the credit to be granted. 3. If the top mulated more generally, the tasks assigned to him by the supervisor for the semester should be aimed primarily at fine-tuning the assig can be supplemented and approved at the end of the semester. Compiler Construction uctory class on compiler construction for bachelor students in computer science. The goal of the class is to introduce basic principles and the design and implementation of programming language development platform. Then, programming language C#, its fundamental cc s, loops, definitions and calls of functions will be discussed. Attention is focused on the object oriented programming in C# - class def loods, properties, static members, Garbage Collector, inheritance and polymorphism, collections, dele	ocused practically ethod of data proce al foundation and p Z,ZK Interested in 3D gra- nics applications) c Z partial tasks that he he end of the seme t.cz/student/studijni bic of the work that gnment so that the Z,ZK of compilers for str theme of the class KZ onstruction, types c inition and class in and exception proc KZ soft platform. The st nologies such as L INQ to Objects, LI ssing domain-speci I, Storage Model ar	5 so that after essing (data presentation 4 aphics and course. 1 e / she will ester. 2. The i/formulare). the student assignment 5 udents to s. 4 of variables, istancing, cessing, as 4 tudents will INQ - a set NQ to XML ific objects and Mapping 4
Students will be int finishing the course collection, transforr BI-BLE The course exten animation. It of BI-BPR.21 1. At the beginnin perform during the external supervisor The completed and has reserved is forr BI-CCN This is an introdu understa BI-CS1 The goal of the cou- operators, arrays constructors, meth BI-CS2 The C# language a get to know object of features for que and LINQ to SQL (ORM). This part of BI-CS3	roduced into the field of Big Data processing where nonrelational (NoSQL) database engines are typically used today. The course is for e students were able to choose suitable tools (mostly open source) and techniques, design and implement a simplest reproducible me mation/aggregation, presentation). Students get acquainted with various architectures for processing and storing big data. A theoretic of individual technologies will be supplemented with specific examples from practice. Blender ds knowledge of opensource program Blender from BI-MGA (Multimedia and Graphics Applications) course. It is intended for those i fifers a complete and practically oriented introduction to Blender environment. Students may continue to BI-PGA (Programming graph Bachelor project g of the semester, the student reserves the topic of the bachelor's thesis and connects with the supervisor. He / she will arrange the semester to process the assignment. If he completes these tasks, the supervisor vill award him a credit from the subject BI-BPR at t enters the information on granting the credit using the form "Granting credit from the external supervisor of the final thesis" (http://tit.cvu d signed form must be delivered in person or by email to the SZZ coordinator, who will arrange for the credit to be granted. 3. If the top mulated more generally, the tasks assigned to him by the supervisor for the semester should be aimed primarily at fine-tuning the assign and implementation of programming languages. Seeing and actually understanding self-compilation is the overarching Programming in C# use is to introduce .NET Framework as a multi-language development platform. Then, programming language C#, its fundamental cc s, loops, definitions and calls of functions will be discussed. Attention is focused on the object oriented programming in C# - class def tods, properties, static members, Garbage Collector, inheritance and polymorphism, collections, delegates, and generics. Debugging well as work with files are emphasized. C# language and d	ocused practically ethod of data proce al foundation and p Z,ZK Interested in 3D gra- nics applications) c Z partial tasks that he he end of the seme t.cz/student/studijni bic of the work that gnment so that the Z,ZK of compilers for str theme of the class KZ onstruction, types c inition and class in and exception proc KZ soft platform. The st nologies such as L INQ to Objects, LI ssing domain-speci I, Storage Model ar	5 so that after essing (data presentation 4 aphics and course. 1 e / she will ester. 2. The i/formulare). the student assignment 5 udents to s. 4 of variables, istancing, cessing, as 4 tudents will INQ - a set NQ to XML ific objects and Mapping 4
Students will be int finishing the course collection, transforr BI-BLE The course exten animation. It of BI-BPR.21 1. At the beginnin perform during the external supervisor The completed and has reserved is forr BI-CCN This is an introdu understa BI-CS1 The goal of the cou- operators, arrays constructors, meth BI-CS2 The C# language a get to know object of features for que and LINQ to SQL (ORM). This part of BI-CS3 The students will be	roduced into the field of Big Data processing where nonrelational (NoSQL) database engines are typically used today. The course is for e students were able to choose suitable tools (mostly open source) and techniques,design and implement a simplest reproducible me mation/aggregation, presentation). Students get acquainted with various architectures for processing and storing big data. A theoretic of individual technologies will be supplemented with specific examples from practice. Blender ds knowledge of opensource program Blender from Bl-MGA (Multimedia and Graphics Applications) course. It is intended for those i fifers a complete and practically oriented introduction to Blender environment. Students may continue to BI-PGA (Programming graph Bachelor project g of the semester, the student reserves the topic of the bachelor's thesis and connects with the supervisor. He / she will arrange the semester to process the assignment. If he completes these tasks, the supervisor will award him a credit from the subject BI-BRA at t enters the information on granting the credit using the form "Granting credit from the external supervisor of the final thesis" (http://fit.eu d signed form must be delivered in person or by email to the SZZ coordinator, who will arrange for the credit to be granted. 3. If the top mulated more generally, the tasks assigned to him by the supervisor for the semester should be aimed primarily at fine-tuning the assig- can be supplemented and approved at the end of the semester. Compiler Construction uctory class on compiler construction for bachelor students in computer science. The goal of the class is to introduce basic principles and the design and implementation of programming languages. Seeing and actually understanding self-compilation is the overarching Programming in C# use is to introduce. NET Framework as a multi-language development platform. Then, programming language C#, its fundamental cs, s, loops, definitions and calls of functions will be discussed. Attention is focused on the o	ocused practically sethod of data processed al foundation and practically sethod of data processed in 3D granics applications) of Z partial tasks that has he end of the sement.cz/student/studijnioic of the work that grament so that the Z,ZK of compilers for struction, types of inition and class in and exception processed kZ postruction, types of platform. The structor platform and class in and exception process for the structor platform. The structor platform is platform. The structor platform is platform and class in platform. The structor platform is platform is platform. The structor platform is platform is platform in the structor platform. The structor platform is platform is platform. The structor platform is platform is platform in the structor platform is platform. The structor platform is platform is platform. The structor platform is platform is platform. The structor platform is platform is platform in the structor platform is platform. The structor platform is platform is platform in the structor platform in the str	5 so that after essing (data presentation 4 aphics and course. 1 e / she will ester. 2. The i/formulare). the student assignment 5 udents to s. 4 of variables, astancing, cessing, as 4 tudents will INQ - a set NQ to XML iffic objects and Mapping 4 possibilities
Students will be int finishing the course collection, transforr BI-BLE The course exten animation. It of BI-BPR.21 1. At the beginnin perform during the external supervisor The completed and has reserved is forr BI-CCN This is an introdu understa BI-CS1 The goal of the cour operators, arrays constructors, meth BI-CS2 The C# language a get to know object of features for que and LINQ to SQL (ORM). This part of BI-CS3 The students will be BI-DBS.21	roduced into the field of Big Data processing where nonrelational (NoSQL) database engines are typically used today. The course is for e students were able to choose suitable tools (mostly open source) and techniques, design and implement a simplest reproducible me mation/aggregation, presentation). Students get acquainted with various architectures for processing and storing big data. A theoretic of individual technologies will be supplemented with specific examples from practice. Blender ds knowledge of opensource program Blender from BI-MGA (Multimedia and Graphics Applications) course. It is intended for those i fifers a complete and practically oriented introduction to Blender environment. Students may continue to BI-PGA (Programming graph Bachelor project g of the semester, the student reserves the topic of the bachelor's thesis and connects with the supervisor. He / she will arrange the semester to process the assignment. If he completes these tasks, the supervisor vill award him a credit from the subject BI-BPR at t enters the information on granting the credit using the form "Granting credit from the external supervisor of the final thesis" (http://tit.cvu d signed form must be delivered in person or by email to the SZZ coordinator, who will arrange for the credit to be granted. 3. If the top mulated more generally, the tasks assigned to him by the supervisor for the semester should be aimed primarily at fine-tuning the assign and implementation of programming languages. Seeing and actually understanding self-compilation is the overarching Programming in C# use is to introduce .NET Framework as a multi-language development platform. Then, programming language C#, its fundamental cc s, loops, definitions and calls of functions will be discussed. Attention is focused on the object oriented programming in C# - class def tods, properties, static members, Garbage Collector, inheritance and polymorphism, collections, delegates, and generics. Debugging well as work with files are emphasized. C# language and d	coused practically sethed of data process al foundation and p Z,ZK interested in 3D granics applications) of Z partial tasks that he he end of the sement.cz/student/studinio i.cz/student/studinio joic of the work that gnment so that the of compilers for struction, types of inition and class in and exception proof KZ ooft platform. The struction, the struction, such as Li INQ to Objects, LII using domain-speci I, Storage Model ar KZ of the development	5 so that after essing (data presentation 4 aphics and course. 1 e / she will ester. 2. The i/formulare). the student assignment 5 udents to s. 4 of variables, astancing, cessing, as 4 fudents will INQ - a set NQ to XML iffic objects and Mapping 4 possibilities 5

nrococcing control	ation - the relational database model. They learn the principles of normalizing a relational database schema. They understand the funda		
-	ling parallel user access to a single data source, as well as recovering a database engine from a failure. They are briefly introduced t		-
in relational databa	ases with respect to speed of access to large quantities of data. This introductory-level course does not cover: Administration of datab optimizing database applications, distributed database systems, data stores.	oase systems, det	ugging and
BI-DML.21	Discrete Mathematics and Logic	Z,ZK	5
Students will get ad	equainted with the basic concepts of propositional logic and predicate logic and learn to work with their laws. Necessary concepts for	n set theory will b	e explained.
Special attention is	paid to relations, their general properties, and their types, especially functional relations, equivalences, and partial orders. The cours	e also lays down t	the basics of
	combinatorics and number theory, with emphasis on modular arithmetics.		
BI-EHA.21	Ethical Hacking	Z,ZK	5
The goal of the co	purse is to introduce students to the field of penetration testing and ethical hacking. The course deals with cybersecurity threats, vuln	erabilities, and the	ir possible
exploitation in com	puter networks, web applications, wireless networks, operating systems, and others like the Internet of Things or cloud. The focus is	on hands-on expe	rience with
	vulnerabilities testing and the following process of penetration test documentation.		
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).		
BI-EJA	Enterprise Java	Z,ZK	4
The course is on a	dvanced technologies in the Java programming language. The focus is on technologies for development of enterprise information sys	stems which are c	onnected to
	a database and are accessed through the web interface.		
BI-EJK	Enterprise Java and Kotlin	Z,ZK	4
	lvanced technologies in the Java and Kotlin programming languages. The focus is on technologies for developing enterprise informat		microservice
	architecture, that can be deployed to the cloud.		
BI-EP1.24	Effective programming 1	KZ	4
	The course is taught in Czech.		I
BI-EP2	Efficient Programming 2	KZ	4
	ficient Programming 1. Students will practice implementation of algorithms by solving typical problems. Various ways of solving individ		-
	with the aim to choose the best one and avoid implementation errors.		,
BI-EPP.21	Economic Business Processes	Z,ZK	5
	rse is to present typical processes related to the usual life cycle of a company. The course focuses mainly on the basic economic and		-
	onment of the Czech Republic and the basics of management. In the course, students are acquainted with the typical phases of the		
	e company, through the management of property and capital structure, financing of the company, determining the cost function of the	1 2 2	,
	evaluating the financial health of the company and its eventual rehabilitation or termination.	o company and la	501 00010, 10
BI-FBI.21	Financial Business Intelligence	Z,ZK	5
	se is to acquaint students primarily with financial accounting as a tool for recording business operations and documents for business	,	-
	s for comparison with other companies and management decision process at the tactical and strategic level. The second view is man		-
	ement and prediction of business development. Management accounting allows monitoring of the financial status and performance of b	-	-
	ds, enables a multidimensional view of business data, enables to control effectively factors affecting the return on invested capital and		
	ated to future business decisions. The principles of management accounting, described in this course, are the basis of Business Inte		
	information systems, decision support systems, and other knowledge-oriented systems.	0	
BI-FEM.21	Fundamentals of Economics		
	FUNDALIEURAIS OF FUNDAUCS	7 7K	5
The course allows		Z,ZK t contains a gene	5 ral overview
The course allows	the students to discover basics of economic theory, which will then be used in subsequent courses of economics and management.	,	-
	the students to discover basics of economic theory, which will then be used in subsequent courses of economics and management. of fundamental microeconomic and macroeconomic topics.	t contains a gene	ral overview
BI-FMU	the students to discover basics of economic theory, which will then be used in subsequent courses of economics and management. of fundamental microeconomic and macroeconomic topics. Financial and Management Accounting	t contains a gene	ral overview
BI-FMU The aim of the cour	the students to discover basics of economic theory, which will then be used in subsequent courses of economics and management. of fundamental microeconomic and macroeconomic topics. Financial and Management Accounting rse is explanation of basic terms in the theory of accounting, the principles of balancing the property amounts and liabilities in the par	t contains a gene Z,ZK ticular accounting	ral overview 5 operations,
BI-FMU The aim of the cour operations in accor	the students to discover basics of economic theory, which will then be used in subsequent courses of economics and management. of fundamental microeconomic and macroeconomic topics. Financial and Management Accounting rse is explanation of basic terms in the theory of accounting, the principles of balancing the property amounts and liabilities in the par unts and accounting statements including opening and closing of bookkeeping. The course provides students with a legal modificatio	t contains a gene Z,ZK ticular accounting n of bookkeeping,	5 operations, description
BI-FMU The aim of the cour operations in accor	the students to discover basics of economic theory, which will then be used in subsequent courses of economics and management. of fundamental microeconomic and macroeconomic topics. Financial and Management Accounting rse is explanation of basic terms in the theory of accounting, the principles of balancing the property amounts and liabilities in the par	t contains a gene Z,ZK ticular accounting n of bookkeeping,	5 operations, description
BI-FMU The aim of the cour operations in accor of economic oper	the students to discover basics of economic theory, which will then be used in subsequent courses of economics and management. of fundamental microeconomic and macroeconomic topics. Financial and Management Accounting rse is explanation of basic terms in the theory of accounting, the principles of balancing the property amounts and liabilities in the par unts and accounting statements including opening and closing of bookkeeping. The course provides students with a legal modificatio ations based on current methods of double-entry bookkeeping for enterprising subjects in the Czech Republic. Principles of manager Business Inteligence moduls in Business information systems.	t contains a gene Z,ZK ticular accounting n of bookkeeping, nent accounting a	5 operations, description are base of
BI-FMU The aim of the cour operations in accor of economic oper BI-GIT	the students to discover basics of economic theory, which will then be used in subsequent courses of economics and management. of fundamental microeconomic and macroeconomic topics. Financial and Management Accounting rse is explanation of basic terms in the theory of accounting, the principles of balancing the property amounts and liabilities in the par unts and accounting statements including opening and closing of bookkeeping. The course provides students with a legal modificatio ations based on current methods of double-entry bookkeeping for enterprising subjects in the Czech Republic. Principles of manager Business Inteligence moduls in Business information systems. Version control system GIT	t contains a gene Z,ZK ticular accounting n of bookkeeping, ment accounting a KZ	p operations, description are base of
BI-FMU The aim of the cour operations in accor of economic oper BI-GIT Students will be int	the students to discover basics of economic theory, which will then be used in subsequent courses of economics and management. of fundamental microeconomic and macroeconomic topics. Financial and Management Accounting rse is explanation of basic terms in the theory of accounting, the principles of balancing the property amounts and liabilities in the para unts and accounting statements including opening and closing of bookkeeping. The course provides students with a legal modificatio ations based on current methods of double-entry bookkeeping for enterprising subjects in the Czech Republic. Principles of manager Business Inteligence moduls in Business information systems. Version control system GIT roduced to basic principles of version control systems. These principles will be then shown on DCVS Git both theoretically and practi	t contains a gene Z,ZK ticular accounting n of bookkeeping, ment accounting a KZ cally. In this partic	cal overview 5 g operations, description are base of 2 cular system
BI-FMU The aim of the cour operations in accor of economic oper BI-GIT Students will be int even the ir	the students to discover basics of economic theory, which will then be used in subsequent courses of economics and management. of fundamental microeconomic and macroeconomic topics. Financial and Management Accounting rese is explanation of basic terms in the theory of accounting, the principles of balancing the property amounts and liabilities in the par unts and accounting statements including opening and closing of bookkeeping. The course provides students with a legal modificatio ations based on current methods of double-entry bookkeeping for enterprising subjects in the Czech Republic. Principles of manager Business Inteligence moduls in Business information systems. Version control system GIT roduced to basic principles of version control systems. These principles will be then shown on DCVS Git both theoretically and practi mplementation details will be shown. Students will be challenged to use Git as users, project managers, team leaders as well as Git s	t contains a gene Z,ZK ticular accounting n of bookkeeping, ment accounting a KZ cally. In this partic	5 g operations, description are base of 2 sular system ors.
BI-FMU The aim of the cour operations in accor of economic oper BI-GIT Students will be int even the ir BI-GIT.21	the students to discover basics of economic theory, which will then be used in subsequent courses of economics and management. of fundamental microeconomic and macroeconomic topics. Financial and Management Accounting res is explanation of basic terms in the theory of accounting, the principles of balancing the property amounts and liabilities in the par unts and accounting statements including opening and closing of bookkeeping. The course provides students with a legal modificatio 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. Version control system GIT roduced to basic principles of version control systems. These principles will be then shown on DCVS Git both theoretically and practi mplementation details will be shown. Students will be challenged to use Git as users, project managers, team leaders as well as Git s SW Development Technologies	t contains a gene Z,ZK ticular accounting n of bookkeeping, ment accounting a KZ cally. In this partic server administrate Z	s 5 g operations, description are base of 2 cular system ors. 3
BI-FMU The aim of the cour operations in accor of economic oper BI-GIT Students will be int even the ir BI-GIT.21	the students to discover basics of economic theory, which will then be used in subsequent courses of economics and management. of fundamental microeconomic and macroeconomic topics. Financial and Management Accounting res is explanation of basic terms in the theory of accounting, the principles of balancing the property amounts and liabilities in the par unts and accounting statements including opening and closing of bookkeeping. The course provides students with a legal modificatio 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. Version control system GIT roduced to basic principles of version control systems. These principles will be then shown on DCVS Git both theoretically and practi mplementation details will be shown. Students will be challenged to use Git as users, project managers, team leaders as well as Git s SW Development Technologies ed at one of the rudimental team software development technology - version control. To be more specific, we will introduce students to	t contains a gene Z,ZK ticular accounting n of bookkeeping, ment accounting a KZ cally. In this partic terver administrate Z o Git, the informati	s 5 g operations, description are base of 2 cular system ors. 3
BI-FMU The aim of the cour operations in accor of economic oper BI-GIT Students will be int even the ir BI-GIT.21 This course is aime	the students to discover basics of economic theory, which will then be used in subsequent courses of economics and management. of fundamental microeconomic and macroeconomic topics. Financial and Management Accounting res is explanation of basic terms in the theory of accounting, the principles of balancing the property amounts and liabilities in the par unts and accounting statements including opening and closing of bookkeeping. The course provides students with a legal modificatio ations based on current methods of double-entry bookkeeping for enterprising subjects in the Czech Republic. Principles of management Business Inteligence moduls in Business information systems. Version control system GIT roduced to basic principles of version control systems. These principles will be then shown on DCVS Git both theoretically and practi mplementation details will be shown. Students will be challenged to use Git as users, project managers, team leaders as well as Git s SW Development Technologies et at one of the rudimental team software development technology - version control. To be more specific, we will introduce students to from hell, as Linus Torvalds nicknamed it, and provide a comprehensive guide into its depths, as well as for day-to-day use	t contains a gene Z,ZK ticular accounting n of bookkeeping, ment accounting a KZ cally. In this partic terver administrate Z o Git, the informatio	s s s s s s s s s s s s s s s s s s s s s s s s s s
BI-FMU The aim of the cour operations in accour of economic oper BI-GIT Students will be int even the in BI-GIT.21 This course is aime BI-HAM	the students to discover basics of economic theory, which will then be used in subsequent courses of economics and management. of fundamental microeconomic and macroeconomic topics. Financial and Management Accounting res is explanation of basic terms in the theory of accounting, the principles of balancing the property amounts and liabilities in the pau unts and accounting statements including opening and closing of bookkeeping. The course provides students with a legal modificatio ations based on current methods of double-entry bookkeeping for enterprising subjects in the Czech Republic. Principles of management Business Inteligence moduls in Business information systems. Version control system GIT roduced to basic principles of version control systems. These principles will be then shown on DCVS Git both theoretically and practi mplementation details will be shown. Students will be challenged to use Git as users, project managers, team leaders as well as Git s SW Development Technologies ed at one of the rudimental team software development technology - version control. To be more specific, we will introduce students to from hell, as Linus Torvalds nicknamed it, and provide a comprehensive guide into its depths, as well as for day-to-day use HW accelerated network traffic monitoring	t contains a gene Z,ZK ticular accounting n of bookkeeping, ment accounting a KZ cally. In this partic terver administrate Z o Git, the informati KZ	al overview 5 operations, description are base of 2 cular system ors. 3 ion manager 4
BI-FMU The aim of the cour operations in accour of economic oper BI-GIT Students will be int even the in BI-GIT.21 This course is aime BI-HAM This course introd	the students to discover basics of economic theory, which will then be used in subsequent courses of economics and management. of fundamental microeconomic and macroeconomic topics. Financial and Management Accounting res is explanation of basic terms in the theory of accounting, the principles of balancing the property amounts and liabilities in the par unts and accounting statements including opening and closing of bookkeeping. The course provides students with a legal modificatio 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. Version control system GIT roduced to basic principles of version control systems. These principles will be then shown on DCVS Git both theoretically and practi mplementation details will be shown. Students will be challenged to use Git as users, project managers, team leaders as well as Git s SW Development Technologies et at one of the rudimental team software development technology - version control. To be more specific, we will introduce students to from hell, as Linus Torvalds nicknamed it, and provide a comprehensive guide into its depths, as well as for day-to-day use HW accelerated network traffic monitoring duces students to modern and widely used technologies and principles in the area of network infrastructure and traffic monitoring. Th	t contains a gene Z,ZK ticular accounting n of bookkeeping, nent accounting a KZ cally. In this partic carver administrate Z o Git, the informati KZ e monitoring and	al overview 5 g operations, description are base of 2 cular system ors. 3 ion manager 4 analysis of
BI-FMU The aim of the cour operations in accour of economic oper BI-GIT Students will be int even the in BI-GIT.21 This course is aime BI-HAM This course introo network traffic are	the students to discover basics of economic theory, which will then be used in subsequent courses of economics and management. of fundamental microeconomic and macroeconomic topics. Financial and Management Accounting res is explanation of basic terms in the theory of accounting, the principles of balancing the property amounts and liabilities in the par unts and accounting statements including opening and closing of bookkeeping. The course provides students with a legal modificatio 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. Version control system GIT roduced to basic principles of version control systems. These principles will be then shown on DCVS Git both theoretically and practi mplementation details will be shown. Students will be challenged to use Git as users, project managers, team leaders as well as Git s SW Development Technologies ed at one of the rudimental team software development technology - version control. To be more specific, we will introduce students to from hell, as Linus Torvalds nicknamed it, and provide a comprehensive guide into its depths, as well as for day-to-day use HW accelerated network traffic monitoring duces students to modern and widely used technologies and principles in the area of network infrastructure and traffic monitoring. Th mandatory skills to network operators (planning and development of resources and infrastructure) and security analysts alike (as a s	t contains a gene Z,ZK ticular accounting n of bookkeeping, nent accounting a KZ cally. In this partic cerver administrate Z o Git, the information KZ e monitoring and ource of information	al overview 5 g operations, description are base of 2 cular system ors. 3 ion manager 4 analysis of on and data
BI-FMU The aim of the cour operations in accour of economic oper BI-GIT Students will be int even the in BI-GIT.21 This course is aime BI-HAM This course introo network traffic are	the students to discover basics of economic theory, which will then be used in subsequent courses of economics and management. of fundamental microeconomic and macroeconomic topics. Financial and Management Accounting res is explanation of basic terms in the theory of accounting, the principles of balancing the property amounts and liabilities in the par unts and accounting statements including opening and closing of bookkeeping. The course provides students with a legal modificatio 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. Version control system GIT roduced to basic principles of version control systems. These principles will be then shown on DCVS Git both theoretically and practi mplementation details will be shown. Students will be challenged to use Git as users, project managers, team leaders as well as Git s SW Development Technologies ed at one of the rudimental team software development technology - version control. To be more specific, we will introduce students to from hell, as Linus Torvalds nicknamed it, and provide a comprehensive guide into its depths, as well as for day-to-day use HW accelerated network traffic monitoring duces students to modern and widely used technologies and principles in the area of network infrastructure and traffic monitoring. Th mandatory skills to network operators (planning and development of resources and infrastructure) and security analysts alike (as a s oals of the course are to acquaint students with the modern trends and cornerstone principles in the area of monitoring network traffic	t contains a gene Z,ZK ticular accounting n of bookkeeping, nent accounting a KZ cally. In this partic cerver administrate Z o Git, the information KZ e monitoring and ource of information	al overview 5 g operations, description are base of 2 cular system ors. 3 ion manager 4 analysis of on and data
BI-FMU The aim of the cour operations in accou- of economic oper BI-GIT Students will be int even the ir BI-GIT.21 This course is aime BI-HAM This course introo network traffic are for analysis). The g	the students to discover basics of economic theory, which will then be used in subsequent courses of economics and management. of fundamental microeconomic and macroeconomic topics. Financial and Management Accounting res is explanation of basic terms in the theory of accounting, the principles of balancing the property amounts and liabilities in the par ants and accounting statements including opening and closing of bookkeeping. The course provides students with a legal modification ations based on current methods of double-entry bookkeeping for enterprising subjects in the Czech Republic. Principles of manager Business Inteligence moduls in Business information systems. Version control system GIT roduced to basic principles of version control systems. These principles will be then shown on DCVS Git both theoretically and practi- mplementation details will be shown. Students will be challenged to use Git as users, project managers, team leaders as well as Git s SW Development Technologies ed at one of the rudimental team software development technology - version control. To be more specific, we will introduce students to from hell, as Linus Torvalds nicknamed it, and provide a comprehensive guide into its depths, as well as for day-to-day use HW accelerated network traffic monitoring duces students to modern and widely used technologies and principles in the area of network infrastructure and traffic monitoring. Th mandatory skills to network operators (planning and development of resources and infrastructure) and security analysts alike (as a s bas of the course are to acquaint students with the modern trends and cornerstone principles in the area of monitoring network traffic level and to develop their practical abilities in this field.	t contains a gene Z,ZK ticular accounting n of bookkeeping, ment accounting a KZ cally. In this partic cerver administrate Z o Git, the information KZ e monitoring and ource of information c on a hardware a	al overview 5 g operations, description are base of 2 cular system ors. 3 ion manager 4 analysis of on and data and software
BI-FMU The aim of the cour operations in accor of economic oper BI-GIT Students will be int even the ir BI-GIT.21 This course is aime BI-HAM This course introo network traffic are for analysis). The g	the students to discover basics of economic theory, which will then be used in subsequent courses of economics and management. of fundamental microeconomic and macroeconomic topics. Financial and Management Accounting res is explanation of basic terms in the theory of accounting, the principles of balancing the property amounts and liabilities in the par unts and accounting statements including opening and closing of bookkeeping. The course provides students with a legal modification ations based on current methods of double-entry bookkeeping for enterprising subjects in the Czech Republic. Principles of manager Business Inteligence moduls in Business information systems. Version control system GIT roduced to basic principles of version control systems. These principles will be then shown on DCVS Git both theoretically and practi- mplementation details will be shown. Students will be challenged to use Git as users, project managers, team leaders as well as Git s SW Development Technologies ed at one of the rudimental team software development technology - version control. To be more specific, we will introduce students to from hell, as Linus Torvalds nicknamed it, and provide a comprehensive guide into its depths, as well as for day-to-day use HW accelerated network traffic monitoring duces students to modern and widely used technologies and principles in the area of network infrastructure and traffic monitoring. Th mandatory skills to network operators (planning and development of resources and infrastructure) and security analysts alike (as a s bas of the course are to acquaint students with the modern trends and cornerstone principles in the area of monitoring network traffic level and to develop their practical abilities in this field. Human Aspects in Cryptography and Security	t contains a gene Z,ZK ticular accounting n of bookkeeping, ment accounting a KZ cally. In this partic cally. Cally call the call the call call the call the call the call the call call the call the call the call the call the call the call call the call the ca	al overview 5 operations, description are base of 2 cular system ors. 3 ion manager 4 analysis of on and data and software 5
BI-FMU The aim of the cour operations in accor of economic oper BI-GIT Students will be int even the ir BI-GIT.21 This course is aime BI-HAM This course introo network traffic are for analysis). The g	the students to discover basics of economic theory, which will then be used in subsequent courses of economics and management. of fundamental microeconomic and macroeconomic topics. Financial and Management Accounting res is explanation of basic terms in the theory of accounting, the principles of balancing the property amounts and liabilities in the par- unts and accounting statements including opening and closing of bookkeeping. The course provides students with a legal modificatio ations based on current methods of double-entry bookkeeping for enterprising subjects in the Czech Republic. Principles of manager Business Inteligence moduls in Business information systems. Version control system GIT roduced to basic principles of version control systems. These principles will be then shown on DCVS Git both theoretically and practi mplementation details will be shown. Students will be challenged to use Git as users, project managers, team leaders as well as Git s SW Development Technologies ed at one of the rudimental team software development technology - version control. To be more specific, we will introduce students to from hell, as Linus Torvalds nicknamed it, and provide a comprehensive guide into its depths, as well as for day-to-day use HW accelerated network traffic monitoring tuces students to modern and widely used technologies and principles in the area of network infrastructure and traffic monitoring. The mandatory skills to network operators (planning and development of resources and infrastructure) and security analysts alike (as a s oals of the course are to acquaint students with the modern trends and cornerstone principles in the area of monitoring network traffic level and to develop their practical abilities in this field. Human Aspects in Cryptography and Security students interested not only in technical scope of computer science, but also in making products usable - for users and for developents	t contains a gene Z,ZK ticular accounting n of bookkeeping, ment accounting a KZ cally. In this partic cally. Cally call the call the call call the call the call the call the call call the call the call the call the call the call the call call the call the ca	al overview 5 operations, description are base of 2 cular system ors. 3 ion manager 4 analysis of on and data and software 5
BI-FMU The aim of the cour operations in accor of economic oper BI-GIT Students will be int even the ir BI-GIT.21 This course is aime BI-HAM This course introo network traffic are for analysis). The g	the students to discover basics of economic theory, which will then be used in subsequent courses of economics and management. of fundamental microeconomic and macroeconomic topics. Financial and Management Accounting res is explanation of basic terms in the theory of accounting, the principles of balancing the property amounts and liabilities in the par- unts and accounting statements including opening and closing of bookkeeping. The course provides students with a legal modificatio ations based on current methods of double-entry bookkeeping for enterprising subjects in the Czech Republic. Principles of manager Business Inteligence moduls in Business information systems. Version control system GIT roduced to basic principles of version control systems. These principles will be then shown on DCVS Git both theoretically and practi mplementation details will be shown. Students will be challenged to use Git as users, project managers, team leaders as well as Git s SW Development Technologies ted at one of the rudimental team software development technology - version control. To be more specific, we will introduce students to from hell, as Linus Torvalds nicknamed it, and provide a comprehensive guide into its depths, as well as for day-to-day use HW accelerated network traffic monitoring tuces students to modern and widely used technologies and principles in the area of network infrastructure and traffic monitoring. The mandatory skills to network operators (planning and development of resources and infrastructure) and security analysts alike (as a s oals of the course are to acquaint students with the modern trends and cornerstone principles in the area of monitoring network traffi level and to develop their practical abilities in this field. Human Aspects in Cryptography and Security use their gained knowledge to design, plan and analyse their own projects in the context of human-centered security.	t contains a gene Z,ZK ticular accounting n of bookkeeping, ment accounting a KZ cally. In this partic erver administrate Z o Git, the informatic KZ e monitoring and ource of informatic c on a hardware a Z,ZK s. Students of this	al overview 5 g operations, description are base of 2 cular system ors. 3 ion manager 4 analysis of on and data and software 5 course can
BI-FMU The aim of the cour operations in accor of economic oper BI-GIT Students will be int even the ir BI-GIT.21 This course is aime BI-HAM This course introo network traffic are for analysis). The g	the students to discover basics of economic theory, which will then be used in subsequent courses of economics and management. of fundamental microeconomic and macroeconomic topics. Financial and Management Accounting rea is explanation of basic terms in the theory of accounting, the principles of balancing the property amounts and liabilities in the par- unts and accounting statements including opening and closing of bookkeeping. The course provides students with a legal modificatio ations based on current methods of double-entry bookkeeping for enterprising subjects in the Czech Republic. Principles of manager Business Intelligence moduls in Business information systems. Version control system GIT roduced to basic principles of version control systems. These principles will be then shown on DCVS Git both theoretically and practi mplementation details will be shown. Students will be challenged to use Git as users, project managers, team leaders as well as Git s SW Development Technologies to at one of the rudimental team software development technology - version control. To be more specific, we will introduce students to from hell, as Linus Torvalds nicknamed it, and provide a comprehensive guide into its depths, as well as for day-to-day use HW accelerated network traffic monitoring fuces students to modern and widely used technologies and principles in the area of network infrastructure and traffic monitoring. Th mandatory skills to network operators (planning and development of resources and infrastructure) and security analysts alike (as a s oals of the course are to acquaint students with the modern trends and cornerstone principles in the area of monitoring network traffic level and to develop their practical abilities in this field. Human Aspects in Cryptography and Security students interested not only in technical scope of computer science, but also in making products usable - for users and for developers use their gained knowledge to design, plan and analyse their own projects in	t contains a gene Z,ZK ticular accounting n of bookkeeping, ment accounting a KZ cally. In this partic cally. Cally call the call the call call the call the call the call the call call the call the call the call the call the call the call call the call the ca	al overview 5 operations, description are base of 2 cular system ors. 3 ion manager 4 analysis of on and data and software 5
BI-FMU The aim of the cour operations in accor of economic oper BI-GIT Students will be int even the ir BI-GIT.21 This course is aime BI-HAM This course introo network traffic are for analysis). The g BI-HAS This course is for s	the students to discover basics of economic theory, which will then be used in subsequent courses of economics and management. of fundamental microeconomic and macroeconomic topics. Financial and Management Accounting res is explanation of basic terms in the theory of accounting, the principles of balancing the property amounts and liabilities in the par- unts and accounting statements including opening and closing of bookkeeping. The course provides students with a legal modificatio ations based on current methods of double-entry bookkeeping for enterprising subjects in the Czech Republic. Principles of manager Business Inteligence moduls in Business information systems. Version control system GIT roduced to basic principles of version control systems. These principles will be then shown on DCVS Git both theoretically and practi mplementation details will be shown. Students will be challenged to use Git as users, project managers, team leaders as well as Git s SW Development Technologies ted at one of the rudimental team software development technology - version control. To be more specific, we will introduce students to from hell, as Linus Torvalds nicknamed it, and provide a comprehensive guide into its depths, as well as for day-to-day use HW accelerated network traffic monitoring tuces students to modern and widely used technologies and principles in the area of network infrastructure and traffic monitoring. Th mandatory skills to network operators (planning and development of resources and infrastructure) and security analysts alike (as a s oals of the course are to acquaint students with the modern trends and cornerstone principles in the area of monitoring network traffic level and to develop their practical abilities in this field. Human Aspects in Cryptography and Security students interested not only in technical scope of computer science, but also in making products usable - for users and for developers use their gained knowledge to design, plan and analyse their own projects in	t contains a gene Z,ZK ticular accounting n of bookkeeping, ment accounting a KZ cally. In this partic server administrate Z o Git, the informatic KZ e monitoring and ource of informatic c on a hardware a Z,ZK s. Students of this Z,ZK	al overview 5 g operations, description are base of 2 cular system ors. 3 ion manager 4 analysis of on and data and software 5 course can 3
BI-FMU The aim of the cour operations in accor of economic oper BI-GIT Students will be int even the ir BI-GIT.21 This course is aime BI-HAM This course introor network traffic are for analysis). The g BI-HAS This course is for s BI-HMI BI-HWB.21	the students to discover basics of economic theory, which will then be used in subsequent courses of economics and management. of fundamental microeconomic and macroeconomic topics. Financial and Management Accounting res is explanation of basic terms in the theory of accounting, the principles of balancing the property amounts and liabilities in the par unts and accounting statements including opening and closing of bookkeeping. The course provides students with a legal modificatio ations based on current methods of double-entry bookkeeping for enterprising subjects in the Czech Republic. Principles of manager Business Inteligence moduls in Business information systems. Version control system GIT roduced to basic principles of version control systems. These principles will be then shown on DCVS Git both theoretically and practi mplementation details will be shown. Students will be challenged to use Git as users, project managers, team leaders as well as Git s SW Development Technologies at at one of the rudimental team software development technology - version control. To be more specific, we will introduce students to from hell, as Linus Torvalds nicknamed it, and provide a comprehensive guide into its depths, as well as for day-to-day use HW accelerated network traffic monitoring fuces students to modern and widely used technologies and principles in the area of network infrastructure and traffic monitoring. The mandatory skills to network operators (planning and development of resources and infrastructure) and security analysts alike (as a s coals of the course are to acquaint students with the modern trends and cornerstone principles in the area of monitoring network traffic level and to develop their practical abilities in this field. Human Aspects in Cryptography and Security students interested not only in technical scope of computer science, but also in making products usable - for users and for developers use their gained knowledge to design, plan and analyse their own projects in	t contains a gene Z,ZK ticular accounting n of bookkeeping, ment accounting a KZ cally. In this partic erver administrator Z o Git, the informatic ource of informatic c on a hardware a Z,ZK S. Students of this Z,ZK	al overview 5 g operations, description are base of 2 cular system ors. 3 ion manager 4 analysis of on and data and software 5 course can 3 5 5 5 3
BI-FMU The aim of the cour operations in accor of economic oper BI-GIT Students will be int even the ir BI-GIT.21 This course is aime BI-HAM This course introor network traffic are for analysis). The g BI-HAS This course is for s BI-HMI BI-HWB.21 The course deals w	the students to discover basics of economic theory, which will then be used in subsequent courses of economics and management. of fundamental microeconomic and macroeconomic topics. Financial and Management Accounting res is explanation of basic terms in the theory of accounting, the principles of balancing the property amounts and liabilities in the para unts and accounting statements including opening and closing of bookkeeping. The course provides students with a legal modificatio ations based on current methods of double-entry bookkeeping for enterprising subjects in the Czech Republic. Principles of manager Business Inteligence moduls in Business information systems. Version control system GIT roduced to basic principles of version control systems. These principles will be then shown on DCVS Git both theoretically and practi mplementation details will be shown. Students will be challenged to use Git as users, project managers, team leaders as well as Git s SW Development Technologies d at one of the rudimental team software development technology - version control. To be more specific, we will introduce students to from hell, as Linus Torvalds nicknamed it, and provide a comprehensive guide into its depths, as well as for day-to-day use HW accelerated network traffic monitoring duces students to modern and widely used technologies and principles in the area of network infrastructure and traffic monitoring. Th mandatory skills to network operators (planning and development of resources and infrastructure) and security analysts alike (as a s coals of the course are to acquaint students with the modern trends and cornerstone principles in the area of monitoring network traffic level and to develop their practical abilities in this field. Human Aspects in Cryptography and Security History of Mathematics and Informatics This course is presented in Czech. Hardware security of computer systems including embedded ones. Students become familiar with the opera	t contains a gene Z,ZK ticular accounting n of bookkeeping, ment accounting a KZ cally. In this partic erver administrator Z o Git, the informatic con a hardware a Z,ZK s. Students of this Z,ZK ting principles of c	s 5 g operations, description are base of 2 ular system 3 ion manager 4 analysis of on and data and software 5 course can 3 3 5
BI-FMU The aim of the cour operations in accor of economic oper BI-GIT Students will be int even the ir BI-GIT.21 This course is aime BI-HAM This course introor network traffic are for analysis). The g BI-HAS This course is for s BI-HMI BI-HWB.21 The course deals w modules, security fer	the students to discover basics of economic theory, which will then be used in subsequent courses of economics and management. of fundamental microeconomic and macroeconomic topics. Financial and Management Accounting rese is explanation of basic terms in the theory of accounting, the principles of balancing the property amounts and liabilities in the para unts and accounting statements including opening and closing of bookkeeping. The course provides students with a legal modificatio 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. Version control system GIT roduced to basic principles of version control systems. These principles will be then shown on DCVS Git both theoretically and practi mplementation details will be shown. Students will be challenged to use Git as users, project managers, team leaders as well as Git s SW Development Technologies d at one of the rudimental team software development technology - version control. To be more specific, we will introduce students to from hell, as Linus Torvalds nicknamed it, and provide a comprehensive guide into its depths, as well as for day-to-day use HW accelerated network traffic monitoring tuces students to modern and widely used technologies and principles in the area of network infrastructure and traffic monitoring. The mandatory skills to network operators (planning and development of resources and infrastructure) and security analysts alike (as a s oals of the course are to acquaint students with the modern trends and cornerstone principles in the area of monitoring network traffic level and to develop their practical abilities in this field. Hurman Aspects in Cryptography and Security students interested not only in technical scope of computer science, but also in making products usable - for users and for developers use their gained knowledge to design, plan and analyse their own projects in	t contains a gene Z,ZK ticular accounting n of bookkeeping, ment accounting a KZ cally. In this partic erver administrator Z o Git, the informatic ource of informatic c on a hardware a Z,ZK S. Students of this Z,ZK ting principles of c ources, including s	s 5 g operations, description are base of 2 ular system 2 ors. 3 ion manager 4 analysis of on and data and software 5 course can 3 3 5 rryptographic side-channel
BI-FMU The aim of the cour operations in accor of economic oper BI-GIT Students will be int even the ir BI-GIT.21 This course is aime BI-HAM This course introor network traffic are for analysis). The g BI-HAS This course is for s BI-HMI BI-HWB.21 The course deals w modules, security fer	the students to discover basics of economic theory, which will then be used in subsequent courses of economics and management. of fundamental microeconomic and macroeconomic topics. Financial and Management Accounting res is explanation of basic terms in the theory of accounting, the principles of balancing the property amounts and liabilities in the para unts and accounting statements including opening and closing of bookkeeping. The course provides students with a legal modificatio ations based on current methods of double-entry bookkeeping for enterprising subjects in the Czech Republic. Principles of manager Business Inteligence moduls in Business information systems. Version control system GIT roduced to basic principles of version control systems. These principles will be then shown on DCVS Git both theoretically and practi mplementation details will be shown. Students will be challenged to use Git as users, project managers, team leaders as well as Git s SW Development Technologies d at one of the rudimental team software development technology - version control. To be more specific, we will introduce students to from hell, as Linus Torvalds nicknamed it, and provide a comprehensive guide into its depths, as well as for day-to-day use HW accelerated network traffic monitoring duces students to modern and widely used technologies and principles in the area of network infrastructure and traffic monitoring. Th mandatory skills to network operators (planning and development of resources and infrastructure) and security analysts alike (as a s coals of the course are to acquaint students with the modern trends and cornerstone principles in the area of monitoring network traffic level and to develop their practical abilities in this field. Human Aspects in Cryptography and Security History of Mathematics and Informatics This course is presented in Czech. Hardware security of computer systems including embedded ones. Students become familiar with the opera	t contains a gene Z,ZK ticular accounting n of bookkeeping, ment accounting a KZ cally. In this partic erver administrator Z o Git, the informatic ource of informatic c on a hardware a Z,ZK S. Students of this Z,ZK ting principles of c ources, including s	s 5 g operations, description are base of 2 ular system 2 ors. 3 ion manager 4 analysis of on and data and software 5 course can 3 3 5 rryptographic side-channel
BI-FMU The aim of the cour operations in accor of economic oper BI-GIT Students will be int even the ir BI-GIT.21 This course is aime BI-HAM This course introor network traffic are for analysis). The g BI-HAS This course is for s BI-HMI BI-HWB.21 The course deals w modules, security fe attacks and tampe	the students to discover basics of economic theory, which will then be used in subsequent courses of economics and management. of fundamental microeconomic and macroeconomic topics. Financial and Management Accounting se is explanation of basic terms in the theory of accounting, the principles of balancing the property amounts and liabilities in the par unts and accounting statements including opening and closing of bookkeeping. The course provides students with a legal modificatio ations based on current methods of double-entry bookkeeping for enterprising subjects in the Czech Republic. Principles of manager Business Inteligence moduls in Business information systems. Version control system GIT roduced to basic principles of version control systems. These principles will be then shown on DCVS Git both theoretically and practi mplementation details will be shown. Students will be challenged to use Git as users, project managers, team leaders as well as Git to SW Development Technologies to at one of the rudimental team software development technology - version control. To be more specific, we will introduce students to from hell, as Linus Torvalds nicknamed it, and provide a comprehensive guide into its depths, as well as for day-to-day use HW accelerated network traffic monitoring duces students to modern and widely used technologies and principles in the area of network infrastructure and traffic monitoring. The mandatory skills to network operators (planning and development of resources and infrastructure) and security analysts alike (as a so as oals of the course are to acquaint students with the modern trends and cornerstone principles in the area of monitoring network traffic level and to develop their practical abilities in this field. Human Aspects in Cryptography and Security students interested not only in technical scope of computer science, but also in making products usable - for users and for developers use their gained knowledge to design, plan and analyse their own projects	t contains a gene Z,ZK ticular accounting n of bookkeeping, ment accounting a KZ cally. In this partic erver administrator Z o Git, the informatic ource of informatic c on a hardware a Z,ZK s. Students of this Z,ZK ting principles of c ources, including so polications and re	s 5 g operations, description are base of 2 value 2 value 3 ion manager 4 analysis of on and data and software 5 course can 3 3 5 ryptographic side-channel lated topics 1
BI-FMU The aim of the cour operations in accor of economic oper BI-GIT Students will be int even the ir BI-GIT.21 This course is aime BI-HAM This course introor network traffic are for analysis). The g BI-HAS This course is for s BI-HMI BI-HWB.21 The course deals w modules, security fe attacks and tampe BI-IDO.21	the students to discover basics of economic theory, which will then be used in subsequent courses of economics and management. of fundamental microeconomic and macroeconomic topics. Financial and Management Accounting res is explanation of basic terms in the theory of accounting, the principles of balancing the property amounts and liabilities in the par unts and accounting statements including opening and closing of bookkeeping. The course provides students with a legal modificatio ations based on current methods of double-entry bookkeeping for enterprising subjects in the Czech Republic. Principles of manager Business Inteligence moduls in Business information systems. Version control systems. These principles will be then shown on DCVS Git both theoretically and practi mplementation details will be shown. Students will be challenged to use Git as users, project managers, team leaders as well as Git s SW Development Technologies to at one of the rudimental team software development technology - version control. To be more specific, we will introduce students to from hell, as Linus Torvalds nicknamed it, and provide a comprehensive guide into its depths, as well as for day-to-day use HW accelerated network traffic monitoring tuces students to modern and widely used technologies and principles in the area of network infrastructure and traffic monitoring. The mandatory skills to network operators (planning and development of resources and infrastructure) and security analysts alike (as a s oals of the course are to acquaint students with the modern trends and cornerstone principles in the area of monitoring network traffic level and to develop their practical abilities in this field. Hurman Aspects in Cryptography and Security students interested not only in technical scope of computer science, but also in making products usable - for users and for developers use their gained knowledge to design, plan and analyse their own projects in the context of human-centered security. History of Mathema	t contains a gene Z,ZK ticular accounting n of bookkeeping, ment accounting a KZ cally. In this partic erver administrate Z o Git, the informati c on a hardware a Z,ZK s. Students of this Z,ZK ting principles of c ources, including s pplications and re Z,ZK	s 5 g operations, description are base of 2 value 2 value 3 ion manager 4 analysis of on and data and software 5 course can 3 iside-channel 1 lated topics 5
BI-FMU The aim of the cour operations in accor of economic oper BI-GIT Students will be int even the ir BI-GIT.21 This course is aime BI-HAM This course is aime for analysis). The g BI-HAS This course is for s BI-HMI BI-HWB.21 The course deals w modules, security fe attacks and tampe BI-IDO.21 The course deals w	the students to discover basics of economic theory, which will then be used in subsequent courses of economics and management. of fundamental microeconomic and macroeconomic topics. Financial and Management Accounting se is explanation of basic terms in the theory of accounting, the principles of balancing the property amounts and liabilities in the par unts and accounting statements including opening and closing of bookkeeping. The course provides students with a legal modificatio ations based on current methods of double-entry bookkeeping for enterprising subjects in the Czech Republic. Principles of manager Business Inteligence moduls in Business information systems. Version control system GIT roduced to basic principles of version control systems. These principles will be then shown on DCVS Git both theoretically and practi mplementation details will be shown. Students will be challenged to use Git as users, project managers, team leaders as well as Git to SW Development Technologies to at one of the rudimental team software development technology - version control. To be more specific, we will introduce students to from hell, as Linus Torvalds nicknamed it, and provide a comprehensive guide into its depths, as well as for day-to-day use HW accelerated network traffic monitoring duces students to modern and widely used technologies and principles in the area of network infrastructure and traffic monitoring. The mandatory skills to network operators (planning and development of resources and infrastructure) and security analysts alike (as a so as oals of the course are to acquaint students with the modern trends and cornerstone principles in the area of monitoring network traffic level and to develop their practical abilities in this field. Human Aspects in Cryptography and Security students interested not only in technical scope of computer science, but also in making products usable - for users and for developers use their gained knowledge to design, plan and analyse their own projects	t contains a gene Z,ZK ticular accounting n of bookkeeping, ment accounting a KZ cally. In this partic erver administrate Z o Git, the informati c on a hardware a Z,ZK s. Students of this Z,ZK ting principles of c ources, including so polications and re Z,ZK ems and services	ral overview 5 9 operations, description are base of 2 cular system ors. 3 ion manager 4 analysis of on and data and software 5 course can 3 ryptographic side-channel lated topics 5 The course
BI-FMU The aim of the cour operations in accord of economic oper BI-GIT Students will be intre- even the intre- BI-GIT.21 This course is aimed BI-HAM This course introord network traffic are for analysis). The g BI-HAS This course is for standard BI-HMI BI-HWB.21 The course deals with modules, security for attacks and tamped BI-IDO.21 The course deals with covers the tools to	the students to discover basics of economic theory, which will then be used in subsequent courses of economics and management. of fundamental microeconomic and macroeconomic topics. Financial and Management Accounting res is explanation of basic terms in the theory of accounting, the principles of balancing the property amounts and liabilities in the para unts and accounting statements including opening and closing of bookkeeping. The course provides students with a legal modificatio 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. Version control system GIT roduced to basic principles of version control systems. These principles will be then shown on DCVS Git both theoretically and practi mplementation details will be shown. Students will be challenged to use Git as users, project managers, team leaders as well as Git to SW Development Technologies dt at one of the rudimental team software development technology - version control. To be more specific, we will introduce students to from hell, as Linus Torvalds nicknamed it, and provide a comprehensive guide into its depths, as well as for day-to-day use HW accelerated network traffic monitoring duces students to modern and widely used technologies and principles in the area of network infrastructure and traffic monitoring. The mandatory skills to network operators (planning and development of resources and infrastructure) and security analysts alike (as a s cals of the course are to acquaint students with the modern trends and cornerstone principles in the area of monitoring network traffic level and to develop their practical abilities in this field. Hurman Aspects in Cryptography and Security students interested not only in technical scope of computer science, but also in making products usable - for users and for developers use their gained knowledge to design, plan and analyse their own projects in the context of huma	t contains a gene Z,ZK ticular accounting n of bookkeeping, ment accounting a KZ cally. In this partic erver administrator Z o Git, the informatic ource of informatic c on a hardware a Z,ZK s. Students of this Z,ZK ting principles of c ources, including so polications and re Z,ZK ems and services ng and deploying	ral overview 5 operations, description are base of 2 cular system ors. 3 ion manager 4 analysis of on and data and software 5 course can 3 ryptographic side-channel lated topics 5 The course software to

BI-IOS	Fundamentals of iOS Application Development for iPhone and iPad	KZ	4
DUOT 24	This course is presented in Czech.	7 71/	5
BI-IOT.21	Internet of Things s on an overview of technologies and development tools used in the field of the Internet of Things (IoT). Lectures are devoted to an over	Z,ZK view of sensors ar	-
	ication technologies designed primarily for this area, and appropriate programming methods. They include an overview of IoT archited		
areas. Within the o	computer labs, students will gain practical experience with developing simple IoT systems using common development environments	(hardware - ARM,	ESP, STM;
	software - Arduino, Raspberry Pi OS).		1
BI-JPO.21	Computer Units	Z,ZK	5
	their basic knowledge of digital computer units acquired in the obligatory course of the program (BIE-SAP), get acquainted in detail v nputer units and processors and their interactions with the environment, including accelerating arithmetic-logic units and using approp		
-	e organization of main memory and other internal memories (addressable, LIFO, FIFO and CAM) will be discussed in detail, including		
	lel and serial data transmissions. They will also get acquainted with the methodology of controller design, with the principles of comm	-	
the environment an	d the architecture of the bus system. The problems will be practically evaluated in the labs and with the help of the educational micropro	ogrammed process	sor simulator
	and programmable hardware design kits (FPGA).	1/7	
BI-JUL.21	Programming in Julia Irse is to introduce the students to Julia, a modern programming language and scientific programming environment. In the first part, th	KZ	5 5
-	eatures of Julia. The second part is focused on thematically diverse applications of tools available in Julia. Students will learn how to v		
	environment and get an overview of its capabilities for solving problems in various fields, which they can encounter during their s	-	
BI-KAB.21	Cryptography and Security	Z,ZK	5
	derstand the mathematical foundations of cryptography and gain an overview of current cryptographic algorithms. They will be able to		-
-	ems based on them and learn the basics of safe use of symmetric and asymmetric cryptographic systems and hash functions in appl actical skills in using standard cryptographic methods with an emphasis on security and will also get acquainted with the basic proce		
BI-KOM.21	Conceptual Modelling	Z,ZK	5
	ised on developing abstract thinking and precise formulation skills using conceptual models. Students learn skills of discerning key te		-
categorize and spe	cify correct relations in complex systems of social reality, mostly enterprises and institutions. Students learn basics of ontological struct	tural modeling in th	he OntoUML
	learn how to express business rules and constraints using the OCL language and foundations of OWL/RDF semantic data represent		
	ns of enterprise engineering, being a discipline for conceptual modelling of enterprises and institutes and their processes. The DEMO n		'MN notation
BI-KOT	Il be taught. The course is designed with the respect to continuation in software implementations. Recommended optional follow-up or Programing in Kotlin	Z,ZK	4
	n, statically-styled object-functional language that exploits the extensive Java language ecosystem while delivering a number of advar		1 .
	Ily Java compliant and allows for mixed projects that preserve existing parts written in Java, and continue with the development of a r		
	with minimum of boiler-plate code. Last but not least, Kotlin is suitable for designing of DSLs (Domain-Specific Languages)		1
BI-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 search from our "exotic" cultures (topics: kinship, religion, social exclusion, migration, globalization, , material culture, language, health		-
anthopological res	shown. The course is presented in Czech.	i, history, death, e	(C) Will De
BI-LA1.21	Linear Algebra 1	Z,ZK	5
We will introduce	students to the basic concepts of linear algebra, such as vectors, matrices, vector spaces. We will define vector spaces over the field	of real and comple	ex numbers
	fields. We will present the concepts of basis and dimension and learn to solve systems of linear equations using the Gaussian elimina		-
the connection w	ith linear manifolds. We define the regularity of matrices and learn to find their inversions using GEM. We will also learn to find eigenv matrix. We will also demonstrate some applications of these concepts in computer science.	alues and eigenve	ectors of a
BI-LA2.21	Linear Algebra 2	Z,ZK	5
	p edm tu rozší í znalosti z p edm tu BI-LA1, kde se pracovalo pouze s vektory ve form n-tic ísel. Zde si zavedeme vektorový pros		-
Seznámíme se ta	ké s pojmem skalární sou in a lineární zobrazení, což nám dovolí ukázat souvislost s lineární algebrou, geometrií a po íta ovou graf	ikou. Dalším velký	m tématem
bude numerická lin	eární algebra, kde si ukážeme potíže s ešením soustav lineárních rovnic na po íta i a možnosti, jak se s tímto problémem vypo ádal	tsd razem na roz	klady matic.
BI-LOG.21	Ukážeme si také aplikace lineární algebry v r zných oborech.	Z,ZK	E
	Mathematical Logic s on the basics of propositional and predicate logic. It starts from the semantic point of view. Based on the notion of truth, satisfiability		5 bce and the
	the of formulas are defined. Methods for determining the satisfiability of formulas, some of which are used for automated proving, are e		
vs. NP problem	and Boolean functions in propositional logic. In predicate logic, the course further deals with formal theories, such as arithmetics, and	their models. The	syntactic
	h to mathematical logic is demonstrated on the axiomatic system of propositional logic and its properties. Gödel's incompleteness the		1
BI-MA1.21	Mathematical Analysis 1	Z,ZK	5
-	se by introducing students to the set of real numbers and its properties, and we note its differences with the set of machine numbers. [¬] of a real variable. We gradually introduce the notions of limits of sequences and functions, continuous functions, and derivatives of functions.	-	-
	ot-finding problems (iterative method of bisection and Newtons method), construction of cubic interpolation (spline), and formulation and		
problems (i.e., the i	ssue of finding extrema of functions). The course is closed with the Landaus asymptotic notation and methods of mathematical description	on of complexity o	f algorithms.
BI-MA2.21	Mathematical Analysis 2	Z,ZK	6
	tes the theme of analysis of real functions of a real variable initiated in BI-MA1 by introducing the Riemann integral. Students will learn the test of the apply Taylors theorem to the	-	
	on method. The next part of the course is devoted to number series, and Taylor polynomials and series. We apply Taylors theorem to the escribed accuracy. Then we study the linear recurrence equations with constant coefficients, the complexity of recursive algorithms, and	-	-
	we introduce the student to the theory of multivariate functions. After establishing basic concepts of partial derivative, gradient, and H		•
analytical method of	of localization of local extrema of multivariate functions as well as the numerical descent method. We conclude the course with the integ		te functions.
BI-MDF.21	Modern Data Formats	KZ	3
-	urse is to give an overview of commonly used data formats for typical types of data. There will be a description of each data type and		
BI-MGA.21	e along with tools available to work with such data. After finishing the course, the students should know how to work with common da Multimedia and Graphics Applications	Z,ZK	^{b.}
	uainted with multimedia technologies and applications for 2D/3D bitmap and vector graphics. During the course, current tools for worl	,	-
	ation will be introduced. Students learn several basic techniques of creation and editing content in computer graphics, introduction to gra		
-	y learn to use multimedia transmission and representation systems, including real-time multimedia processing. They understand the p		ion and use
1 (of graphics processing cards. They gain a number of practical skills, such as vectorizing raster images, retouching photos, or creating	3D models	

BI-MIT	Mikrotik technologies	KZ	3
	on of the subject stands in the introduction of the RouterOS operating system and some network Mikrotik technologies which are con		
	vice providers (ISPs). The students learn how to use and create the architectures of the network solutions which are based on the mo		
and how to adminis	trate and practically deploy them. The successful completion of this subject requires the previous knowledge of elementary computer ne and technologies of the data-link, network and transport layer of the OSI model.	etworks concepts lik	e protocols
BI-ML1.21	Machine Learning 1	Z,ZK	5
The goal of this	course is to introduce students to the basic methods of machine learning. They get theoretical understanding and practical working kind	nowledge of regres	sion and
classification mo	dels in the supervised learning scenario and clustering models in the unsupervised scenario. Students will be aware of the relationsh	ips between model	bias and
variance, and know	the fundamentals of assessing model quality. Moreover, they learn the basic techniques of data preprocessing and multidimensional	data visualization.	In practical
	demonstrations, pandas and scikit libraries in Python will be used.		
BI-ML2.21	Machine Learning 2	Z,ZK	5
	burse is to introduce students to the selected advanced methods of machine learning. In the supervised learning scenario, they, in pa		
and neural networ	ks. In the unsupervised learning scenario students learn the principal component analysis and other dimensionality reduction method basic principles of reinforcement learning and natural language processing.		nis get the
BI-MMP	Multimedia team project	KZ	4
	This course is presented in Czech.	· · ·	
BI-MPP.21	Methods of interfacing peripheral devices	Z,ZK	5
The course is focus	sed on methods for interfacing of peripheral devices. Interfacing of real peripheral devices is focused on techniques based on Universa	I serial bus (USB).	The course
includes both PC s	side and peripheral devices side. Labs are practically oriented. Students gain experience with implementation of relevant parts of USE	3 devices, Linux an	d Windows
	drivers, simple application development, and APIs of selected devices.		
BI-MVT.21	Modern Visualisation Technologies	Z,ZK	5
•	urse is to give an overview of modern visualization technologies and their principles, namely technologies related to virtual and augm		
high resolution disp	plays (e.g., SAGE and video mapping) and their applications in practice. Several lectures deal with the content creation for the mentione	ed technologies, na	mely fractal
	and procedural visualization, scientific data visualization, and 3D model scanning.	7 71/	-
BI-OOP.21	Object-Oriented Programming	Z,ZK	5
	rogramming has been used in the last 50 years to solve computational problems by using graphs of objects that collaborate together t acquainted with the main principles of object-oriented programming and design, used in modern programming languages. The emph	, ,	
course students ge	for developing software, which includes testing, error handing, refactoring, and application of design pattern.	asis is on practical	leciniques
BI-OPT	Introduction to Optical Networks	Z,ZK	4
	overview of optical networking technology with the emphasis on practical utilization in Internet and in network infrastructures, on poss	· · ·	-
-	technology and on their solutions. The course will include the history of optical communications, an overview of passive components	-	
	sators, and others), and an overview of active components (optical switches and amplifiers, high-speed coherent transmission system		
	e topics presented at premium research conferences, such as ECOC or OFC. Attention will also be paid to new applications, such as		
ultrastable freque	ncy 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-ORL	Operations Research and Linear Programming	KZ	5
The subject aims t	o introduce students to the issues of operational research and primarily to the practical application of linear programming as a fundar	nental optimization	technique.
•	nal research primarily focuses on the use of engineering methods (with a mathematical background) to solve practical problems (suc		
BI-OSY.21	Operating Systems	Z,ZK	5
	s a follow-up of the Unix-like operating systems course students deepen their knowledge in areas of OS kernels, process and thread imp		
critical regions, thre	ead scheduling, shared resource allocation and deadlocks, management of virtual memory and data storages, file systems, OS moni and implement simple multithreaded applications. General principles are illustrated on operating systems Solaris, Linux, or MS W	• •	e to design
			7
BI-PA1.21	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	Z,ZK	7
-	ons, concept of recursion. They learn to analyse simple cases of algorithm complexity. They know fundamental algorithms for searchi		-
statements, functi	with linked lists and trees.	ng, sorang, and me	inpulating
BI-PA2.21	Programming and Algorithmics 2	Z,ZK	7
	instruments of object-oriented programming and are able to use them for specifying and implementing abstract data types (stack, que		
	n these skills using the C++ programming language and are introduced to all C++ features needed in object-oriented programming (e		
	copying/moving of objects, operator overloading, inheritance, polymorphism).		0.
BI-PAI.21	Law and Informatics	ZK	5
The aim of the co	urse is to introduce students into the basic legal instruments that they will encounter in their practice. Students will gain knowledge of	doing business in	the Czech
Republic and w	ill be alerted to the pitfalls that await them in business from the point of view of law. They will understand the process of concluding co	ontracts in real and	Internet
,	now their responsibilities in working with the Internet, will be familiar with the institutes of intellectual property law, and will be able to		ense types
and open-source I			
	icenses. Emphasis will also be put on the legal protection of data on the Internet, the registration of Internet domains and protection a	against their misuse	
	icenses. Emphasis will also be put on the legal protection of data on the Internet, the registration of Internet domains and protection a rted to such behaviour in the field of IT that can be classified as criminal under the Czech law. The course will also include analyses c	against their misuse of real cases from p	ractice.
BI-PGA.21	icenses. Emphasis will also be put on the legal protection of data on the Internet, the registration of Internet domains and protection a rted to such behaviour in the field of IT that can be classified as criminal under the Czech law. The course will also include analyses of Programming of Graphic Applications	against their misuse of real cases from p Z,ZK	ractice. 5
BI-PGA.21 The course will pre	icenses. Emphasis will also be put on the legal protection of data on the Internet, the registration of Internet domains and protection a rted to such behaviour in the field of IT that can be classified as criminal under the Czech law. The course will also include analyses of Programming of Graphic Applications sent the possibilities of current professional open-source tools for image editing, video editing, 3D animation (GIMP, Blender) and their	against their misuse of real cases from p Z,ZK use for visualization	ractice. 5 n of specific
BI-PGA.21 The course will pre	icenses. Emphasis will also be put on the legal protection of data on the Internet, the registration of Internet domains and protection a rted to such behaviour in the field of IT that can be classified as criminal under the Czech law. The course will also include analyses of Programming of Graphic Applications sent the possibilities of current professional open-source tools for image editing, video editing, 3D animation (GIMP, Blender) and their nathematical data). Emphasis will be placed on the possibilities of further enhancement of the presented software tools, both using b	against their misuse of real cases from p Z,ZK use for visualization	ractice. 5 n of specific
BI-PGA.21 The course will pre data (3D scenes, r	icenses. Emphasis will also be put on the legal protection of data on the Internet, the registration of Internet domains and protection a rted to such behaviour in the field of IT that can be classified as criminal under the Czech law. The course will also include analyses of Programming of Graphic Applications sent the possibilities of current professional open-source tools for image editing, video editing, 3D animation (GIMP, Blender) and their nathematical data). Emphasis will be placed on the possibilities of further enhancement of the presented software tools, both using b by implementation of plugins.	against their misuse of real cases from p Z,ZK use for visualization uilt-in scripting lang	ractice. 5 n of specific uages and
BI-PGA.21 The course will pre data (3D scenes, r BI-PGR.21	icenses. Emphasis will also be put on the legal protection of data on the Internet, the registration of Internet domains and protection a rted to such behaviour in the field of IT that can be classified as criminal under the Czech law. The course will also include analyses of Programming of Graphic Applications sent the possibilities of current professional open-source tools for image editing, video editing, 3D animation (GIMP, Blender) and their nathematical data). Emphasis will be placed on the possibilities of further enhancement of the presented software tools, both using b by implementation of plugins. Computer graphics programming	against their misuse of real cases from p Z,ZK use for visualization uilt-in scripting lang Z,ZK	ractice. 5 n of specific uages and 5
BI-PGA.21 The course will pre data (3D scenes, r BI-PGR.21 After attending this	icenses. Emphasis will also be put on the legal protection of data on the Internet, the registration of Internet domains and protection a rted to such behaviour in the field of IT that can be classified as criminal under the Czech law. The course will also include analyses of Programming of Graphic Applications sent the possibilities of current professional open-source tools for image editing, video editing, 3D animation (GIMP, Blender) and their nathematical data). Emphasis will be placed on the possibilities of further enhancement of the presented software tools, both using be by implementation of plugins. Computer graphics programming a curse, students can program a simple interactive 3D graphical application like a computer game or scientific visualization, design the	against their misuse of real cases from p Z,ZK use for visualization uilt-in scripting lang Z,ZK a scene, add texture	ractice. 5 n of specific juages and 5 es imitating
BI-PGA.21 The course will pre data (3D scenes, r BI-PGR.21 After attending this geometric details a	icenses. Emphasis will also be put on the legal protection of data on the Internet, the registration of Internet domains and protection a rted to such behaviour in the field of IT that can be classified as criminal under the Czech law. The course will also include analyses or Programming of Graphic Applications sent the possibilities of current professional open-source tools for image editing, video editing, 3D animation (GIMP, Blender) and their nathematical data). Emphasis will be placed on the possibilities of further enhancement of the presented software tools, both using be by implementation of plugins. Computer graphics programming curse, students can program a simple interactive 3D graphical application like a computer game or scientific visualization, design the nd materials (like wall surface, wood, sky), and set up the lighting. At the same time, they understand the fundamental principles and ter	against their misuse of real cases from p Z,ZK use for visualization uilt-in scripting lang Z,ZK e scene, add texture ms used in compute	ractice. 5 n of specific iuages and 5 es imitating er graphics,
BI-PGA.21 The course will pre data (3D scenes, r BI-PGR.21 After attending this geometric details a such as graphical	icenses. Emphasis will also be put on the legal protection of data on the Internet, the registration of Internet domains and protection a rted to such behaviour in the field of IT that can be classified as criminal under the Czech law. The course will also include analyses of Programming of Graphic Applications sent the possibilities of current professional open-source tools for image editing, video editing, 3D animation (GIMP, Blender) and their nathematical data). Emphasis will be placed on the possibilities of further enhancement of the presented software tools, both using be by implementation of plugins. Computer graphics programming a curse, students can program a simple interactive 3D graphical application like a computer game or scientific visualization, design the	against their misuse of real cases from p Z,ZK use for visualization uilt-in scripting lang Z,ZK e scene, add texture ms used in compute ng solid fundament	ractice. 5 n of specific juages and 5 es imitating er graphics, als for your
BI-PGA.21 The course will pre data (3D scenes, r BI-PGR.21 After attending this geometric details a such as graphical professional develo	icenses. Emphasis will also be put on the legal protection of data on the Internet, the registration of Internet domains and protection a rted to such behaviour in the field of IT that can be classified as criminal under the Czech law. The course will also include analyses of Programming of Graphic Applications sent the possibilities of current professional open-source tools for image editing, video editing, 3D animation (GIMP, Blender) and their nathematical data). Emphasis will be placed on the possibilities of further enhancement of the presented software tools, both using be by implementation of plugins. Computer graphics programming curse, students can program a simple interactive 3D graphical application like a computer game or scientific visualization, design the nd materials (like wall surface, wood, sky), and set up the lighting. At the same time, they understand the fundamental principles and ter pipeline, geometric transformations, or lighting model. They gain knowledge allowing orientation in computer graphics and representir programming and animations. They get used to techniques utilized in geometric modeling, modeling curves and surface is curve and surface in the same time utilized in geometric modeling, modeling curves and surface programming and animations. They get used to techniques utilized in geometric modeling, modeling curves and surface is curve and surface in the same time in the same time the same transformation in computer graphics and representing programming and animations. They get used to techniques utilized in geometric modeling, modeling curves and surface is curve and surface in the same time in	against their misuse of real cases from p Z,ZK use for visualization uilt-in scripting lang Z,ZK e scene, add texture ms used in compute ng solid fundament	ractice. 5 n of specific juages and 5 es imitating er graphics, als for your sualization.
BI-PGA.21 The course will pre data (3D scenes, r BI-PGR.21 After attending this geometric details a such as graphical professional develo BI-PHP.1	icenses. Emphasis will also be put on the legal protection of data on the Internet, the registration of Internet domains and protection a rted to such behaviour in the field of IT that can be classified as criminal under the Czech law. The course will also include analyses of Programming of Graphic Applications sent the possibilities of current professional open-source tools for image editing, video editing, 3D animation (GIMP, Blender) and their nathematical data). Emphasis will be placed on the possibilities of further enhancement of the presented software tools, both using be by implementation of plugins. Computer graphics programming curse, students can program a simple interactive 3D graphical application like a computer game or scientific visualization, design the nd materials (like wall surface, wood, sky), and set up the lighting. At the same time, they understand the fundamental principles and ter pipeline, geometric transformations, or lighting model. They gain knowledge allowing orientation in computer graphics and representir pment, e.g., GPU programming and animations. They get used to techniques utilized in geometric modeling, modeling curves and surface Programing in PHP	against their misuse of real cases from p Z,ZK use for visualization uilt-in scripting lang Z,ZK e scene, add textur ms used in comput- ng solid fundament ces, and scientific vi KZ	ractice. 5 n of specific juages and 5 es imitating er graphics, als for your sualization. 4
BI-PGA.21 The course will pre data (3D scenes, r BI-PGR.21 After attending this geometric details a such as graphical professional develo BI-PHP.1 The course is ta	icenses. Emphasis will also be put on the legal protection of data on the Internet, the registration of Internet domains and protection a rted to such behaviour in the field of IT that can be classified as criminal under the Czech law. The course will also include analyses of Programming of Graphic Applications sent the possibilities of current professional open-source tools for image editing, video editing, 3D animation (GIMP, Blender) and their nathematical data). Emphasis will be placed on the possibilities of further enhancement of the presented software tools, both using be by implementation of plugins. Computer graphics programming curse, students can program a simple interactive 3D graphical application like a computer game or scientific visualization, design the nd materials (like wall surface, wood, sky), and set up the lighting. At the same time, they understand the fundamental principles and ter pipeline, geometric transformations, or lighting model. They gain knowledge allowing orientation in computer graphics and representir programming and animations. They get used to techniques utilized in geometric modeling, modeling curves and surface is curve and surface in the same time utilized in geometric modeling, modeling curves and surface programming and animations. They get used to techniques utilized in geometric modeling, modeling curves and surface is curve and surface in the same time in the same time the same transformation in computer graphics and representing programming and animations. They get used to techniques utilized in geometric modeling, modeling curves and surface is curve and surface in the same time in	against their misuse of real cases from p Z,ZK use for visualization uilt-in scripting lang Z,ZK e scene, add textur ms used in comput- ng solid fundament ces, and scientific vi KZ and will use tool that	ractice. 5 n of specific juages and 5 es imitating er graphics, als for your sualization. 4 at eases

BI-PJP.21	Programming Languages and Compilers	Z,ZK	5
	asic compiling methods of programming languages. They are introduced to intermediate representations used in current compilers G		
create a specificat	ion of a translation of a text that conforms a given syntax, to a target code and also to create a compiler based on the specification. T only a programming language but any text in a language generated by a given LL input grammar.	he compiler can tra	anslate not
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 s	tudents of BIE-WSI-WI.2015 branch of study and do not have required knowledge to register for BIE-TWA.1. They should register for the of study.	his course in their 4	th semester
BI-PJS.21	of study.	KZ	5
	JavaScript Programming introduction to Javascript programming. Students will also learn best practices and get acquai nted with tools that make code develo	I I	
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).	· · · ·	
BI-PKM	Introduction to mathematics	Z	4
BI-PMA	This course is presented in Czech. Programming in Mathematica	Z,ZK	4
	rking with modern technical and scientific software. Students will learn how to use different programming styles (functional program	I ' I	
	etc.), how to create dynamic interactive applications and visualisations, data processing and presentations.		- 3
BI-PNO.21	Practical Digital Design	KZ	5
-	rerview of the contemporary digital design flow and learn practical skills to use synchronous design techniques. They understand the		
and implementation	on technologies FPGA and ASIC. Students demonstrate practical use of the design techniques in the course project using modern ir tools.	dustry-standard C	AD design
BI-PPA.21	Programming Paradigms	Z,ZK	5
	ith basic paradigms of high-level programming languages, including their basic execution models, benefits, and disadvantages of paradigms		-
	ligm and its basic principles are explained in details. Logic programming is introduced as another way of declarative programming. The		
on lambda calculu	s and on Lisp (Racket) and Prolog programming languages. Moreover, usage of these principles is demonstrated on modern mainst	eam programming	languages
	such as C++ and Java.		_
BI-PRR.21	Project management	Z,ZK	5
	urse is to introduce students into the basic concepts and principles of project management, i.e. methods of planning, teamwork, ana ation, argumentation and meeting management. Students will practice project management techniques (e.g. SWOT analysis, risk as		
	purce schedule, resource balancing, network graphs) and creation of project documentation. The course is designed especially for st		-
deepening their k	nowledge outside IT, consider starting their own company, or have ambitions to work in middle or senior management positions in la	ge companies. The	e course is
	also suitable for all those who will develop software or hardware in the form of team projects.		
BI-PRS.21	Practical Statistics	KZ	_ 5
	e introduced to methods of applied statistics. They will learn how to work with various types of data, perform analyses, and choose more strategies and exercise	-	
will encompass re	gression and correlation analysis, analysis of variance and non-parametric methods. Students will learn to use the statistical softwar methods on data from real problems.	a R and will apply t	ne studied
BI-PS2	Programming in shell 2	Z,ZK	4
	neral overview of available scripting languages, their syntax, semantics, programming style, data structures, pros and cons. In additi	1 1	eper insight
	into shell and some other particular scripting languages and will get practical experience with shell script programming.		
BI-PSI.21	Computer Networks	Z,ZK	5
	ces students to the principles of computer networking. It covers basic technologies, protocols, and services commonly used in local r s will be amended by proseminars that introduce students into network programming and demonstrate the abilities of advanced netw		
	s will be amended by procerning is that introduce students into network programming and demonstrate the abilities of advanced network devices in the lab within the environment of the operating systems Linux a		oluueniis
BI-PST.21	Probability and Statistics	Z,ZK	5
	the basics of probabilistic thinking, the ability to synthesize prior and posterior information and learn to work with random variables. T		
	m variable distributions and solve applied probabilistic problems in informatics and computer science. Using the statistical induction	-	-
estimations of unk	nown distributional parameters from random sample characteristics. They will also be introduced to the methods for testing statistica	hypotheses and d	letermining
BI-PYT.21	the statistical dependence of two or more random variables. Python Programming	KZ	5
	urse is to get acquainted with basic efficient control and data structures of the Python programming language for text and binary data	I I	
	y of programming in Python and in other programming languages will be explained. Each topic is prepared for students in the format		
enables greater a	ccent to individual student work. Before each lab, students pass a short test on the last week topic. Four homeworks plus a semester	work will be assign	ned during
	the semester.		-
BI-QAP	Quantum algorithms and programming	KZ	5
-	ng students hands-on experience with quantum computers and their programming. We focus on fundaments of quantum mechanics, c orithms showing advantages and limitations of quantum computing. During tutorials students work in open-source software develop		-
-	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-VMN		
	might be an advantage. No previous knowledge of physics is assumed.		
BI-QUA	Quality Assurance	KZ	4
	duces students to the fundamentals of testing and quality management. Students will learn what the role of a tester is in the context		
	vill experience hands-on application testing using both manual and automated testing. At the end of the semester, the student should n a set of test scenarios, prepare test data, automate an appropriate portion of the scenarios, and prepare a report on the bugs found		
BI-SAP.21	Computer Structure and Architecture	Z,ZK	5
	acquainted with the basic architecture and units of a digital computer, understand the structure, function, and implementation of arith	I	
memory, I/O comm	unication, methods of data transfers between the units. The logic design and the implementation of a program-controlled simple proce	ssor is practically in	nplemented
	in the labs using programmable circuits (FPGA), a single-chip microcomputer, and modern design (EDA) tools.		-
BI-SCE1	Computer Engineering Seminar I	Z	4 Studente
	nputer 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		
	rofessional 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
The Seminar of Co	mputer Engineering is a (s)elective course for students who want to deal with deeper topics of digital design, reliability and resistance t	o failures and attack	ks. Students
are approached ir	dividually within the subject. Each student or group of students solves some interesting topic with the selected supervisor. Part of the	e subject is work wit	th scientific
articles and other	professional literature and/or work in K N laboratories. The capacity of the subject is limited by the possibilities of the seminar teacher	rs. The topics are n	ew for each
	semester.		
BI-SEP	World Economy and Business	Z,ZK	4
	esented 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		
corruption and eco	phomic development, which are needed for the right investment decision. Seminars help to improve on the knowledge in the form of d	liscussions based o	n individual
	readings. It is advised to take bachelor level of this course BIE-SEP as a prerequisite.		
BI-SIP.21	Network Programming	Z	5
	fundamental topics of programming network applications. It consists of 4 parts. The introductory part is focused on low-level program		
	oted to designing communication protocols and their verification. The third part introduces the principles and applications of middlews		
Introduces basi	c modern models of distributed computing - P2P and blockchain. All topics will be first explained theoretically and then practices in co programming language environment.	imputer labs using a	a chosen
BI-SKJ.21		Z,ZK	4
	Scripting Languages eneral overview of available scripting languages, their syntax, semantics, programming style, data structures, pros and cons. In addit	1 ' 1	
Students gain a g	into shell and some other particular scripting languages and will get practical experience with shell script programming.	ion, they gain a dee	per maight
BI-SOJ		Z,ZK	4
	Machine Oriented Languages urse will gain an ability to create their own programs in the assembly language of the most common PC platform focusing on optimal us		4 or's footures
	arstion of software with hardware. Next, there will be discussed x86 specifics of the majority of OSes from the application point of view li		
and emclent coope	This knowledge will be used during reverse engineering, optimization, and evaluation of code security.	Tiked to Higher level	languages.
BI-SP1.21	Team Software Project 1	КZ	5
	ands-on experience with the analysis, design, and prototyping of a large-scale software system. Theoretical support is provided in th	1	
-	hat teaches students necessary techniques and principles. Teams consisting of 4-6 students will work on a specific project. The teach		
	ularly consults with the team (at the seminars) both the formal and material aspects of the software design. The resulting software ar		
	and finished in the BIE-SP2 course.		
BI-SP2.21	Team Software Project 2	KZ	5
-	ds-on experience with the iterative development process while working on a large-scale software project. The first iteration is the result	1	-
-	follow-up, the functionality, testing, and documentation of the software system being developed will be emphasized. Students will wor		
teach	er, in the role of the team and project leader, regularly consults with the team (at the seminars) the formal as well as material aspect	s of their solution.	
BI-SPS.21	Administration of Computer Networks and Services	Z,ZK	5
The aim of the cou	irse is to deepen the theoretical knowledge of network technologies and protocols in the environment of network servers administrate	d under the operation	ing systems
Linux and Window	s. The course syllabus requires the knowledge at the level of courses BIE-PSI, BIE-VPS, and BIE-OSY. Practical skills will be gained by	practical hands-on	experience
	with real network infrastructure.		
BI-SQL.1	Language SQL, advanced	KZ	4
	n knowledge obtained in BI-DBS. Students become familiar with advanced relational and non-relational features of SQL language. In particular particular is a standard standa		-
00 ,	queries, OLAP support, object-relational constructions. Part of the course is dedicated to practical database optimization from the point		
	lexes, clusters, index-organized tables, and materialized views. as well as from the point of view query optimization. Execution plan a	-	-
will be discuss	ed. Lectures will usually discuss SQL standard, but many features will be demonstrated on Oracle DBMS. Seminars are based on Or	acle DBMS and pai	rtially on
BI-SRC.21	PostgreSQL.	7 71/	F
	Real-time systems he basic knowledge in the real-time (RT) system theory and in the design methods for RT systems including the dependability issues	Z,ZK	5 edge from
	perimentally verified in computer labs. The course is mainly focused on embedded RT systems, therefore the design kits in the lab ar		-
	course.		
BI-ST1	Network Technology 1	Z	3
	iented to providing the students basic information and practical skills from the area of digital and IP networks. The subject is acredite	1	
	CCNA1 - R&S Introduction to Networks.		lotaoda
BI-ST2	Network Technology 2	Z	3
DIGIZ	This course is presented in Czech.		0
BI-ST3	Network Technology 3	Z	3
	er enhance their knowledge acquired from previous BI-ST1 and BI-ST2 courses. Principles of routing and switching presented during I	1	-
	ded in the course. Students will be able to start fine-tune protocols' settings to gain certain advantages like increased efficiency, pred		
3	simple topology, security, etc.	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
BI-ST4	Network Technology 4	Z	3
	er enhance their knowledge already acquired from previous BI-ST1, BI-ST2, and BI-ST3 courses. Principles of routing and switching	1	-
BI-ST2 courses g	ot further extended in BI-ST3. Students were able to start fine-tune protocols' settings to gain certain advantages like increased effic	iency, predictability,	extension
beyond a simple	e topology, security, etc. This module teaches students to configure and fine-tune Wide Area Networks and to experience a completely	y other type of netw	/ork (Non
Broadcast Multip	le Access) which radically differs from well-known Ethernet (broadcast) type of networks. Students will also manage router and switch	n firmware, perform	password
recoveries, and er	nergency procedures. Also the security aspect is treated; students will learn possible intra- and inter-network attacks and the mitigati	on ways while mair	ntaining the
	network running.	1	
BI-STO	Storage and Filesystems	Z,ZK	4
The student will lea	arn principles and current solutions of storage systems architecture. The module explains principles of data store, protection, and arch	iiving, as so as stora	age scaling,
	load balancing and high availability.		
BI-SVZ.21	Machine vision and image processing	Z,ZK	5
-	are becoming a common part of life by being universally available. Related to this phenomenon is the need to process and evaluate i	-	
millouuces student	s to different types of camera systems and a variety of methods for image and video processing. The course is focused on practical use problems of practice that the graduates may encounter.	e oi camera system	s ior solving
		7 71/	5
BI-SWI.21	Software Engineering ainted with methods of analysis and design of larger software projects that are typically designed and implemented in teams. They co	Z,ZK	-
	ainted with methods of analysis and design of larger software projects that are typically designed and implemented in teams. They co rring the analysis and design of larger software systems that will be developed in the concurrent course BIE-SP1. Students get hands-		
I Then Knowledge at	ning the analysis and design of larger software systems that will be developed in the Concurrent Conse die-SP1. Students get nands-	on experience with	UNUE 1001S

students also gain a theoretical basis in the field of project management, estimation of costs of software projects, and methods of their	and testing. Within the ir development.	course,
BI-TAB.21 Applications of Security in Technology The goal of the course is to introduce students to selected topics from cybersecurity technical applications that are utilized in different industries. Students are utilized in different industries.	Z,ZK	5 erview of
cybersecurity applications and extend their knowledge from the cryptology, the secure code, and system, network, and hardware		
BI-TDA Test driven architecture The course is focused on practical examples of how to develop, test, and deploy software with tools like GitLab, Docker, Kubernetes, and more that a	Are well known in the D	4 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 occ		
BI-TDP.21 Documentation and Presentation	KZ	3
The course is focused on the basics of creating electronic documentation with emphasis on the creation of technical reports of a larger scope, typically learn to create text of a technical report in the LaTeX system, process an electronic presentation using the LaTeX Beamer system, and practically presentation using the LaTeX Beamer system.	=	
the teacher. The course is intended primarily for those students who have chosen the topic of their bachelor's thesis or will choose it within the first 1		
exercises of the course, an active approach to the creation of individual parts of the bachelor's thesis is assumed.	774	
BI-TEX TeX and Typography 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 rules.	Z,ZK course focuses on typ	4 ographic
BI-TIS.21 Information Systems	Z,ZK	5
The goal of this course is to familiarise students with the information systems topic and information systems implementation principles. During the course is to familiarise tudents and their usage is appointed with the CRM ERD MRD and attact the market systems and their usage is appointed with the course is to familiarise tudents.		
"on the market" existing types of systems and their usage in specific industry segments. Students are familiarised with the CRM, ERP, MRP and othe The fundamental part of the course is the introduction to key ideas of an information system selection, evaluation of information system benefits, v		-
implementation and information system implementation based on the project management principles. The emphasis is on the initial customer analysis		-
decide whether it is better to implement any existing information system or to develop a new one from scratch. These factors determine the information s At the end of the course information systems security, operation, support, maintenance, legislation impacts, and government information system		
BI-TJV.21 Java Technology	Z.ZK	5
The goal is to provide knowledge and skills for developing information systems and applications through concepts used in software development and ex from Java language ecosystem. At the course end, the students are able to develop software systems in Java platform.	-	and tools
BI-TPS.21 Computer Networks Technologies	Z,ZK	5
The course introduces students with basic and advanced technologies, components, and interfaces of contemporary computer networks at the physic link layer. The lectures provide theoretical foundations of these technologies and explain relevant physical principles. In the labs, the respective technologies are explained with the second se		-
with the most important ones students will get hands-on experience. Thematically, the course covers both local and long-range optical networks, Ether	-	
always with focus on high-speed networks.		
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 class 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		
other scholarly literature. The capacity is limited by the the potentials of the teachers of the seminar.		
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 class 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		
other scholarly literature. The capacity is limited by the the potentials of the teachers of the seminar.		
	•	pers and
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 class	Z	4 students
	Z	4 students
Theoretical seminar is intended for students which want to come in deeper contact with contemporary theoretical computer science. It is mostly a class 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 other scholarly literature. The capacity is limited by the the potentials of the teachers of the seminar. BI-TS4 Theoretical Seminar IV	Z ical reading group. The a work with scientific pa	4 students pers and 4
Theoretical seminar is intended for students which want to come in deeper contact with contemporary theoretical computer science. It is mostly a class 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 other scholarly literature. The capacity is limited by the the potentials of the teachers of the seminar. BI-TS4 Theoretical Seminar IV Theoretical seminar is intended for students which want to come in deeper contact with contemporary theoretical computer science. It is mostly a class	Z ical reading group. The a work with scientific pa Z ical reading group. The	4 students pers and 4 students
Theoretical seminar is intended for students which want to come in deeper contact with contemporary theoretical computer science. It is mostly a class 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 other scholarly literature. The capacity is limited by the the potentials of the teachers of the seminar. BI-TS4 Theoretical Seminar IV	Z ical reading group. The a work with scientific pa Z ical reading group. The	4 students pers and 4 students
Theoretical seminar is intended for students which want to come in deeper contact with contemporary theoretical computer science. It is mostly a class 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 other scholarly literature. The capacity is limited by the the potentials of the teachers of the seminar. BI-TS4 Theoretical Seminar IV Theoretical seminar is intended for students which want to come in deeper contact with contemporary theoretical computer science. It is mostly a class 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 same treated individually and concern themselves with interesting topics from the latest research in the area. Therefore, an integral part of the course is a same treated individually and concern themselves with interesting topics from the latest research in the area. Therefore, an integral part of the course is a same treated individually and concern themselves with interesting topics from the latest research in the area. Therefore, an integral part of the course is a same treated individually and concern themselves with interesting topics from the latest research in the area. Therefore, an integral part of the course is a same treated individually and concern themselves with interesting topics from the latest research in the area. Therefore, an integral part of the course is a same treated individually and concern themselves with interesting topics from the latest research in the area. Therefore, an integral part of the course is a same treated individually and concern themselves with interesting topics from the latest research in the area. Therefore, an integral part of the course is a same treated individually and concern themselves with interesting topics from the latest research in the area. </td <td>Z ical reading group. The a work with scientific pa Z ical reading group. The</td> <td>4 students pers and 4 students</td>	Z ical reading group. The a work with scientific pa Z ical reading group. The	4 students pers and 4 students
Theoretical seminar is intended for students which want to come in deeper contact with contemporary theoretical computer science. It is mostly a class 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 other scholarly literature. The capacity is limited by the the potentials of the teachers of the seminar. BI-TS4 Theoretical Seminar IV Theoretical seminar is intended for students which want to come in deeper contact with contemporary theoretical computer science. It is mostly a class 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 other scholarly literature. The capacity is limited by the the potentials of the teachers of the seminar. BI-TS4 Theoretical Seminar IV Theoretical seminar is intended for students which want to come in deeper contact with contemporary theoretical computer science. It is mostly a class 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 other scholarly literature. The capacity is limited by the the potentials of the teachers of the seminar. BI-TUR.21 User Interface Design Students gain a basic overview of methods for designing and testing common user interfaces. They get experience to solve the problems where softworks are softworked.	Z ical reading group. The a work with scientific pa Z ical reading group. The a work with scientific pa Q Z <td>4 students pers and 4 students pers and 5 s do not</td>	4 students pers and 4 students pers and 5 s do not
Theoretical seminar is intended for students which want to come in deeper contact with contemporary theoretical computer science. It is mostly a class 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 other scholarly literature. The capacity is limited by the the potentials of the teachers of the seminar. BI-TS4 Theoretical Seminar IV Theoretical seminar is intended for students which want to come in deeper contact with contemporary theoretical computer science. It is mostly a class 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 other scholarly literature. The capacity is limited by the the potentials of the teachers of the seminar. BI-TS4 Theoretical Seminar IV Theoretical seminar is intended for students which want to come in deeper contact with contemporary theoretical computer science. It is mostly a class 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 other scholarly literature. The capacity is limited by the the potentials of the teachers of the seminar. BI-TUR.21 User Interface Design Students gain a basic overview of methods for designing and testing common user interfaces. They get experience to solve the problems where softw communicate with the user optimally, since the needs and characteristics of users are not taken into account during product development. Students gate a set of users are not taken into account during product development.	Z ical reading group. The a work with scientific pa Z ical reading group. The a work with scientific pa Q Z <td>4 students pers and 4 students pers and 5 s do not</td>	4 students pers and 4 students pers and 5 s do not
Theoretical seminar is intended for students which want to come in deeper contact with contemporary theoretical computer science. It is mostly a class 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 other scholarly literature. The capacity is limited by the the potentials of the teachers of the seminar. BI-TS4 Theoretical Seminar IV Theoretical seminar is intended for students which want to come in deeper contact with contemporary theoretical computer science. It is mostly a class 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 other scholarly literature. The capacity is limited by the the potentials of the teachers of the seminar. BI-TS4 Theoretical Seminar IV Theoretical seminar is intended for students which want to come in deeper contact with contemporary theoretical computer science. It is mostly a class 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 other scholarly literature. The capacity is limited by the the potentials of the teachers of the seminar. BI-TUR.21 User Interface Design Students gain a basic overview of methods for designing and testing common user interfaces. They get experience to solve the problems where softworks are softworked.	Z ical reading group. The a work with scientific pa Z ical reading group. The a work with scientific pa Q Z <td>4 students pers and 4 students pers and 5 s do not</td>	4 students pers and 4 students pers and 5 s do not
Theoretical seminar is intended for students which want to come in deeper contact with contemporary theoretical computer science. It is mostly a class 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 other scholarly literature. The capacity is limited by the the potentials of the teachers of the seminar. BI-TS4 Theoretical Seminar IV Theoretical seminar is intended for students which want to come in deeper contact with contemporary theoretical computer science. It is mostly a class 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 other scholarly literature. The capacity is limited by the the potentials of the teachers of the seminar. BI-TS4 Theoretical Seminar IV Theoretical seminar is intended for students which want to come in deeper contact with contemporary theoretical computer science. It is mostly a class 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 other scholarly literature. The capacity is limited by the the potentials of the teachers of the seminar. BI-TUR.21 User Interface Design Students gain a basic overview of methods for designing and testing common user interfaces. They get experience to solve the problems where softw communicate with the user optimally, since the needs and characteristics of users are not taken into account during product development. Students gain guers into the development process to ensure optimal interface for them. BI-TWA.21 Des	Z ical reading group. The a work with scientific pa Z ical reading group. The a work with scientific pa Z Z ical reading group. The a work with scientific pa Z,ZK Z,ZK Z,ZK Z,ZK Ical paguage describ	4 students pers and 4 students pers and 5 s do not nods that 5 oing the
Theoretical seminar is intended for students which want to come in deeper contact with contemporary theoretical computer science. It is mostly a class 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 other scholarly literature. The capacity is limited by the the potentials of the teachers of the seminar. BI-TS4 Theoretical Seminar IV Theoretical seminar is intended for students which want to come in deeper contact with contemporary theoretical computer science. It is mostly a class 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 other scholarly literature. The capacity is limited by the the potentials of the teachers of the seminar. BI-TS4 Theoretical Seminar IV Theoretical seminar is intended for students which want to come in deeper contact with contemporary theoretical computer science. It is mostly a class 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 other scholarly literature. The capacity is limited by the the potentials of the teachers of the seminar. BI-TUR.21 User Interface Design Students gain a basic overview of methods for designing and testing common user interfaces. They get experience to solve the problems where softw communicate with the user optimally, since the needs and characteristics of users are not taken into account during product development. Students get bring users into the development process to ensure optimal interface for them. BI-TWA.21 <t< td=""><td>Z ical reading group. The a work with scientific pa Z ical reading group. The a work with scientific pa Z,ZK Z,ZK ian an overview of mether Z,ZK ies of language describit, which will be demonstitioned</td><td>4 students pers and 4 students pers and 5 s do not nods that 5 bing the trated in</td></t<>	Z ical reading group. The a work with scientific pa Z ical reading group. The a work with scientific pa Z,ZK Z,ZK ian an overview of mether Z,ZK ies of language describit, which will be demonstitioned	4 students pers and 4 students pers and 5 s do not nods that 5 bing the trated in
Theoretical seminar is intended for students which want to come in deeper contact with contemporary theoretical computer science. It is mostly a class 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 other scholarly literature. The capacity is limited by the the potentials of the teachers of the seminar. BI-TS4 Theoretical Seminar IV Theoretical seminar is intended for students which want to come in deeper contact with contemporary theoretical computer science. It is mostly a class 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 other scholarly literature. The capacity is limited by the the potentials of the teachers of the seminar. BI-TUR.21 User Interface Design Students gain a basic overview of methods for designing and testing common user interfaces. They get experience to solve the problems where softw communicate with the user optimally, since the needs and characteristics of users are not taken into account during product development. Students gain a basic course of web application development. Initially, the students become familiar with HTTP and its possibilities and partly with some propertion.	Z ical reading group. The a work with scientific pa Z ical reading group. The a work with scientific pa Z,ZK vare and other products ain an overview of meth Z,ZK ies of language describ which will be demonstrant y, Doctrine 2. Development	4 students pers and 4 students pers and 5 s do not nods that 5 bing the trated in
Theoretical seminar is intended for students which want to come in deeper contact with contemporary theoretical computer science. It is mostly a class 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 other scholarly literature. The capacity is limited by the the potentials of the teachers of the seminar. BI-TS4 Theoretical Seminar IV Theoretical seminar is intended for students which want to come in deeper contact with contemporary theoretical computer science. It is mostly a class 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 other scholarly literature. The capacity is limited by the the potentials of the teachers of the seminar. BI-TUR.21 User Interface Design Students gain a basic overview of methods for designing and testing common user interfaces. They get experience to solve the problems where softw communicate with the user optimally, since the needs and characteristics of users are not taken into account during product development. Students gate bring users into the development process to ensure optimal interface for them. BI-TWA.21 Design of Web Applications The basic course of web application development. Initially, the students become familiar with HTTP and its possibilities and partly with some properties structure (HTML) and presentation of document on the Web (CSS). These skills provide the necessary basis for the development of Web applications modern libraries facilitate the development of Web pages applications. Server side will be demonstrated on PHP technology using frameworks Symfor on the client side	Z ical reading group. The a work with scientific pa Z ical reading group. The a work with scientific pa ical reading group. The a work with scientific pa Z,ZK Z,ZK ian an overview of mether Z,ZK ies of language describ which will be demonsion y, which will be demonsion y, which will be demonsion X, ZK	4 students pers and 4 students pers and 5 s do not nods that 5 oing the trated in opments 5
Theoretical seminar is intended for students which want to come in deeper contact with contemporary theoretical computer science. It is mostly a class 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 other scholarly literature. The capacity is limited by the the potentials of the teachers of the seminar. BI-TS4 Theoretical Seminar IV Theoretical seminar is intended for students which want to come in deeper contact with contemporary theoretical computer science. It is mostly a class 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 other scholarly literature. The capacity is limited by the the potentials of the teachers of the seminar. BI-TUR.21 User Interface Design Students gain a basic overview of methods for designing and testing common user interfaces. They get experience to solve the problems where softw communicate with the user optimally, since the needs and characteristics of users are not taken into account during product development. Students gain guess into the development process to ensure optimal interface for them. BI-TWA.21 Design of Web Applications The basic course of web application development. Initially, the students become familiar with HTTP and its possibilities and partly with some propertitistruce (HTML) and presentation of document on the Web (CSS). These skills provide the necessary basis for the development of Web applications modern libraries facilitate the development of Web pages applications. Server side will be demonstrated on PHP technology using frameworks Symfor on the client side will be de	Z ical reading group. The a work with scientific pa Z ical reading group. The a work with scientific pa ical reading group. The a work with scientific pa Z,ZK Vare and other products ain an overview of meth Z,ZK ies of language describ which will be demonsing ny 2, Doctrine 2. Develocts Z,ZK Structures look like at th	4 students pers and 4 students pers and 5 s do not nods that 5 oing the trated in opments 5 ne lowest
Theoretical seminar is intended for students which want to come in deeper contact with contemporary theoretical computer science. It is mostly a class 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 other scholarly literature. The capacity is limited by the the potentials of the teachers of the seminar. BI-TS4 Theoretical Seminar IV Theoretical seminar is intended for students which want to come in deeper contact with contemporary theoretical computer science. It is mostly a class 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 other scholarly literature. The capacity is limited by the the potentials of the teachers of the seminar. BI-TUR.21 User Interface Design Students gain a basic overview of methods for designing and testing common user interfaces. They get experience to solve the problems where softw communicate with the user optimally, since the needs and characteristics of users are not taken into account during product development. Students gate bring users into the development process to ensure optimal interface for them. BI-TWA.21 Design of Web Applications The basic course of web application development. Initially, the students become familiar with HTTP and its possibilities and partly with some properties structure (HTML) and presentation of document on the Web (CSS). These skills provide the necessary basis for the development of Web applications modern libraries facilitate the development of Web pages applications. Server side will be demonstrated on PHP technology using frameworks Symfor on the client side	Z ical reading group. The a work with scientific pa Z ical reading group. The a work with scientific pa ical reading group. The a work with scientific pa Z,ZK Z,ZK ises of language describ which will be demonsion y, which will be demonsion	4 students pers and 4 students pers and 5 s do not nods that 5 oing the trated in opments 5 ne lowest what the
Theoretical seminar is intended for students which want to come in deeper contact with contemporary theoretical computer science. It is mostly a class 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 other scholarly literature. The capacity is limited by the the potentials of the teachers of the seminar. BI-TS4 Theoretical Seminar IV Theoretical seminar is intended for students which want to come in deeper contact with contemporary theoretical computer science. It is mostly a class 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 other scholarly literature. The capacity is limited by the the potentials of the teachers of the seminar. BI-TUR.21 User Interface Design Students gain a basic overview of methods for designing and testing common user interfaces. They get experience to solve the problems where softw communicate with the user optimally, since the needs and characteristics of users are not taken into account during product development. Students gain guesrs into the development process to ensure optimal interface for them. BI-TWA.21 Design of Web Applications The basic course of web application development. Initially, the students become familiar with HTTP and its possibilities and partly with some properties structure (HTML) and presentation of document on the Web (CSS). These skills provide the necessary basis for the development of Web applications modern libraries facilitate the development of Web pages applications. Server side will be demonstrated on PHP technology using frameworks Symfor on the client side will	Z ical reading group. The a work with scientific pa Z ical reading group. The a work with scientific pa ical reading group. The a work with scientific pa Z,ZK Z,ZK ises of language describ which will be demonsing y, which will be demonsing y, boctrine 2. Develoct: Z,ZK structures look like at the duce the consumption; yomputer power supply log	4 students pers and 4 students pers and 5 s do not nods that 5 sing the trated in ppments 5 ne lowest what the poks like
Theoretical seminar is intended for students which want to come in deeper contact with contemporary theoretical computer science. It is mostly a class 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 other scholarly literature. The capacity is limited by the the potentials of the teachers of the seminar. BI-TS4 Theoretical Seminar IV Theoretical seminar is intended for students which want to come in deeper contact with contemporary theoretical computer science. It is mostly a class 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 other scholarly literature. The capacity is limited by the the potentials of the teachers of the seminar. BI-TUR.21 User Interface Design Students gain a basic overview of methods for designing and testing common user interfaces. They get experience to solve the problems where softw communicate with the user optimally, since the needs and characteristics of users are not taken into account during product development. Students gain gains a basic overview of methods for designing and testing common user interfaces. They get experience to solve the problems where softw communicate with the user optimally, since the needs and characteristics of users are not taken into account during product development. Students gain gains a basic overview of methods for designing and testing common user interfaces. They get experience to solve the problems where softw communicate with the user optimally, since the needs and characteristics of users are not taken into account during product development. Students gaing users into the development process to ensure optimal interface for them. <	Z ical reading group. The a work with scientific pa Z ical reading group. The a work with scientific pa ical reading group. The a work with scientific pa Z,ZK Vare and other products ain an overview of meth Z,ZK ies of language describ which will be demonsiny 2, Doctrine 2. Develoct. Z,ZK structures look like at th duce the consumption; v mputer power supply loo Z,ZK	4 students pers and 4 students pers and 5 s do not nods that 5 oring the trated in opments 5 ne lowest what the poks like 5
Theoretical seminar is intended for students which want to come in deeper contact with contemporary theoretical computer science. It is mostly a class 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 other scholarly literature. The capacity is limited by the the potentials of the teachers of the seminar. BI-TS4 Theoretical Seminar IV Theoretical seminar is intended for students which want to come in deeper contact with contemporary theoretical computer science. It is mostly a class 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 other scholarly literature. The capacity is limited by the the potentials of the teachers of the seminar. BI-TUR.21 User Interface Design Students gain a basic overview of methods for designing and testing common user interfaces. They get experience to solve the problems where softw communicate with the user optimally, since the needs and characteristics of users are not taken into account during product development. Students gabin a basic course of web application development. Initially, the students become familiar with HTTP and its possibilities and partly with some propertist structure (HTML) and presentation of document on the Web (CSS). These skills provide the necessary basis for the development of Web applications modern libraries facilitate the development of Web pages applications. Server side will be demonstrated on PHP technology using framework Symoto on the client side will be demonstrated using a JavaScript language with library jQuery and possibly MV* framework Rea BI-TZP.21 Technological Fundamentals of Computers <td>Z ical reading group. The a work with scientific pa Z ical reading group. The a work with scientific pa ical reading group. The a work with scientific pa Z,ZK Z,ZK ies of language describ which will be demonsing y, which will be demonsing y, be characterized by the consumption of the consumptin of the consumption of the consumptin of th</td> <td>4 students pers and 4 students pers and 5 s do not nods that 5 s do not trated in opments 5 ne lowest what the pooks like 5</td>	Z ical reading group. The a work with scientific pa Z ical reading group. The a work with scientific pa ical reading group. The a work with scientific pa Z,ZK Z,ZK ies of language describ which will be demonsing y, which will be demonsing y, be characterized by the consumption of the consumptin of the consumption of the consumptin of th	4 students pers and 4 students pers and 5 s do not nods that 5 s do not trated in opments 5 ne lowest what the pooks like 5
Theoretical seminar is intended for students which want to come in deeper contact with contemporary theoretical computer science. It is mostly a class 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 other scholarly literature. The capacity is limited by the the potentials of the teachers of the seminar. BI-TS4 Theoretical Seminar IV Theoretical seminar is intended for students which want to come in deeper contact with contemporary theoretical computer science. It is mostly a class 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 other scholarly literature. The capacity is limited by the the potentials of the teachers of the seminar. BI-TUR.21 User Interface Design Students gain a basic overview of methods for designing and testing common user interfaces. They get experience to solve the problems where softw communicate with the user optimally, since the needs and characteristics of users are not taken into account during product development. Students gain gains a basic overview of methods for designing and testing common user interfaces. They get experience to solve the problems where softw communicate with the user optimally, since the needs and characteristics of users are not taken into account during product development. Students gain gains a basic overview of methods for designing and testing common user interfaces. They get experience to solve the problems where softw communicate with the user optimally, since the needs and characteristics of users are not taken into account during product development. Students gaing users into the development process to ensure optimal interface for them. <	Z ical reading group. The a work with scientific pa Z ical reading group. The a work with scientific pa ical reading group. The a work with scientific pa Z,ZK Z,ZK ies of language describ which will be demonsing y, which will be demonsing y, be characterized by the consumption of the consumptin of the consumption of the consumptin of th	4 students pers and 4 students pers and 5 s do not nods that 5 oring the trated in opments 5 ne lowest what the poks like 5
Theoretical seminar is intended for students which want to come in deeper contact with contemporary theoretical computer science. It is mostly a class 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 other scholarly literature. The capacity is limited by the the potentials of the teachers of the seminar. BI-TS4 Theoretical Seminar IV Theoretical seminar is intended for students which want to come in deeper contact with contemporary theoretical computer science. It is mostly a class 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 other scholarly literature. The capacity is limited by the the potentials of the teachers of the seminar. BI-TUR.21 User Interface Design Students gain a basic overview of methods for designing and testing common user interfaces. They get experience to solve the problems where softw communicate with the user optimally, since the needs and characteristics of users are not taken into account during product development. Students gain basic course of web application development. Initially, the students become familiar with HTTP and its possibilities and partly with some propertistructure (HTML) and presentation of document on the Web (CSS). These skills provide the necessary basis for the development of Web applications modern libraries facilitate the development of Web pages applications. Server side will be demonstrated on PHP technology using frameworks Symfo on the client side will be demonstrated on PHP technology using frameworks Symfo on the client side will be demonstrated on PHP technological Fundoandal s of computers Students get acquainted with the fundamentals of digital a	Z ical reading group. The a work with scientific pa Ical reading group. The a work with scientific pa ical reading group. The a work with scientific pa Ical reading group. The a work with scientific pa Vare and other products ain an overview of meth Z,ZK ies of language describ which will be demonsing y, Z,ZK structures look like at the duce the consumption; y ymputer power supply low Z,ZK erview of threats in cybe equaltions. Z amiliar with basic com	4 students pers and 4 students pers and 5 s do not nods that 5 s do not nods that 5 s do not nods that 5 s do not source s do not source sourc
Theoretical seminar is intended for students which want to come in deeper contact with contemporary theoretical computer science. It is mostly a class 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 other scholarly literature. The capacity is limited by the the potentials of the teachers of the seminar. BI-TS4 Theoretical Seminar IV Theoretical seminar is intended for students which want to come in deeper contact with contemporary theoretical computer science. It is mostly a class 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 other scholarly literature. The capacity is limited by the the potentials of the teachers of the seminar. BI-TUR.21 User Interface Design Students gain a basic overview of methods for designing and testing common user interfaces. They get experience to solve the problems where softw communicate with the user optimally, since the needs and characteristics of users are not taken into account during product development. Students gain basic course of web application development. Initially, the students become familiar with HTTP and its possibilities and partly with some propertistructure (HTML) and presentation of document on the Web (CSS). These skills provide the necessary basis for the development of Web applications modern libraries facilitate the development of Web pages applications. Server side will be demonstrated on PHP technology using frameworks Symfol on the client side will be demonstrated on PHP technology using frameworks Symfol on the client side will be demonstrated on PHP technology using frameworks Symfol (in principle). In the labs, students model the behavior of basic electrical circuits in SW Mat	Z ical reading group. The a work with scientific pa Ical reading group. The a work with scientific pa ical reading group. The a work with scientific pa Ical reading group. The a work with scientific pa Z,ZK Vare and other products ain an overview of meth Z,ZK which will be demonsing my 2, Doctrine 2. Develoct. Z,ZK structures look like at th duce the consumption; omputer power supply low Z,ZK erview of threats in cybe eglaniliar with basic com erminal).	4 students pers and 4 students pers and 5 s do not nods that 5 s do not nods that 5 s do not nods that 5 s do not s hot s hot s do not s hot s h
Theoretical seminar is intended for students which want to come in deeper contact with contemporary theoretical computer science. It is mostly a class 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 content scholarly literature. The capacity is limited by the the potentials of the teachers of the seminar. BI-TS4 Theoretical Seminar IV Theoretical seminar is intended for students which want to come in deeper contact with contemporary theoretical computer science. It is mostly a class 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 other scholarly literature. The capacity is limited by the the potentials of the teachers of the seminar. BI-TUR.21 User Interface Design Students gain a basic overview of methods for designing and testing common user interfaces. They get experience to solve the problems where softw communicate with the user optimally, since the needs and characteristics of users are not taken into account during product development. Students gr bring users into the development process to ensure optimal interface for them. BI-TWA.21 Design of Web Applications The basic course of web application development. Initially, the students become familiar with HTTP and its possibilities and partly with some properties structure (HTML) and presentation of document on the Web (CSS). These skills provide the necessary basis for the development of Web applications. Server side will be demonstrated on PHV bechnology using framework Symfo on the client side will be demonstrated on PHV bechnology using framework Symfo on the clie	Z ical reading group. The a work with scientific pa Ical reading group. The a work with scientific pa ical reading group. The a work with scientific pa Ical reading group. The a work with scientific pa Z,ZK vare and other products ain an overview of meth Z,ZK which will be demonstration my 2, Doctrine 2. Develoct. Z,ZK structures look like at th duce the consumption; womputer power supply low Z,ZK erview of threats in cybe egulations. Z a familiar with basic con erminal). KZ	4 students pers and 4 students pers and 5 s do not nods that 5 s do not nods that 5 s do not nods that 5 s do not s hot s hot s do not s hot s hot
Theoretical seminar is intended for students which want to come in deeper contact with contemporary theoretical computer science. It is mostly a class 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 other scholarly literature. The capacity is limited by the the potentials of the teachers of the seminar. BI-TS4 Theoretical Seminar IV Theoretical seminar is intended for students which want to come in deeper contact with contemporary theoretical computer science. It is mostly a class 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 other scholarly literature. The capacity is limited by the the potentials of the teachers of the seminar. BI-TUR.21 User Interface Design Students gain a basic overview of methods for designing and testing common user interfaces. They get experience to solve the problems where softw communicate with the user optimally, since the needs and characteristics of users are not taken into account during product development. Students gain basic course of web application development. Initially, the students become familiar with HTTP and its possibilities and partly with some propertistructure (HTML) and presentation of document on the Web (CSS). These skills provide the necessary basis for the development of Web applications modern libraries facilitate the development of Web pages applications. Server side will be demonstrated on PHP technology using frameworks Symfol on the client side will be demonstrated on PHP technology using frameworks Symfol on the client side will be demonstrated on PHP technology using frameworks Symfol (in principle). In the labs, students model the behavior of basic electrical circuits in SW Mat	Z ical reading group. The a work with scientific pa Ical reading group. The a work with scientific pa ical reading group. The a work with scientific pa Ical reading group. The a work with scientific pa Z,ZK Vare and other products ain an overview of meth Z,ZK Icas of language describ which will be demonstration my 2, Doctrine 2. Develoc Ct. Z,ZK structures look like at th duce the consumption; womputer power supply low Z,ZK erview of threats in cybe egulations. Z e familiar with basic com erminal). KZ functions of multiuser o	4 students pers and 4 students pers and 5 s do not nods that 5 s do not nods that 5 s do not nods that 5 s do not s do not s hat 5 s do not s do not s hat 5 s do not s do not s hat 5 s do not 5 s do not s hat 5 s do not s hat 5 s do not 5 s do not s hat 5 s do not 5 s do not 5
Theoretical seminar is intended for students which want to come in deeper contact with contemporary theoretical computer science. It is mostly a class 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 other scholarly literature. The capacity is limited by the the potentials of the teachers of the seminar. BI-TS4 Theoretical Seminar IV Theoretical seminar is intended for students which want to come in deeper contact with contemporary theoretical computer science. It is mostly a class 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 other scholarly literature. The capacity is limited by the the potentials of the teachers of the seminar. BI-TUR.21 User Interface Design Students gain a basic overview of methods for designing and testing common user interfaces. They get experience to solve the problems where softw communicate with the user optimally, since the needs and characteristics of users are not taken into account during product development. Students gets bring users into the development process to ensure optimal interface for them. BI-TWA.21 Design of Web Applications The client Side will be demonstrated using a JavaScript language with library [Query and possibly MV* framework Rea BI-TZP.21 Technological Fundamentals of digital and analog circuits, as well as basic retering them. Students learn how computer level. They are introduced to the function of a transistor. They will understand why processors generate heat, why cooling is necessary, and how to rea (in principle). I	Z ical reading group. The a work with scientific partical reading group. The ical reading group. The a work with scientific partical reading group. The ical reading group. The a work with scientific partical reading group. The Z,ZK vare and other products ain an overview of meth Z,ZK which will be demonsing my 2, Doctrine 2. Develoct. Z,ZK structures look like at the duce the consumption; operative of threats in cybe equilations. Z,ZK erview of threats in cybe egulations. Z e familiar with basic conterminal). KZ functions of multiuser o orties of this OS family; of advanced users who	4 students pers and 4 students pers and 5 s do not nods that 5 s do not nods that 5 s do not nods that 5 s do not s do not s hat 5 s do not 5 s do not s hat 5 s do not s hat 5 s do not 5 s do not s hat 5 s do not 5 s

	Selected Applications of Combinatorics	Z	3
issue from applicat	introduce students in an accessible form to various branches of theoretical computer science and combinatorics. In contrast to the b	asic courses, we a	oproach the
	ions to theory. Together, we will first refresh the basic knowledge needed to design and analyze algorithms and introduce some basic		
	ticipation of students, we will focus on solving popular and easily formulated problems from various areas of (not only theoretical) info		
will select probler	ns to be solved will include, for example, graph theory, combinatorial and algorithmic game theory, approximation algorithms, optimiz	ation and more. Sti	udents will
	also try to implement solutions to the studied problems with a special focus on the effective use of existing tools.	7 71/	
BI-VDC.21	Virtualization and Data Centers	Z,ZK	5
	rse is to familiarize students with technology basis of cloud computer systems. It shows principles and techniques used in design and h as various kinds of virtualization and high availability of servers, storages, and software layers. The course guides through data cer	-	
	rid clouds. Student learn current trends in the architecture of IT infrastructure and its configuration for classic and cloud applications.	•	
	ation, and operation of complex infrastructures for modern applications with respect to scalability and protection against overloads, o		
BI-VES.21	Embedded Systems	Z,ZK	5
	esign embedded systems and develop software for them. They get basic knowledge of the most common microcontrollers and embedded		
	peripheral circuits, programming methods, and applications. They get practical skills with development kits and tools.		
BI-VHS	Virtual game worlds	ZK	4
-	tudents to create a complex virtual world. The course is a continuation of basic graphical courses (MGA, PGR, BLE,). This current stud	lents knowledge is	furthermore
complemented by	the theory of game design, principles of writing dialogues and characters in order to create a functional and complex virtual world. T	he course can be f	ollowed by
	the course MI-PVR with the task of converting scenes and their dynamics into a fully virtual environment suitable for VR devi	ces.	
BI-VIZ.21	Data Visualization	KZ	5
	an overview of the types and characteristics of data as well as suitable visualization methods. This will aid the students in understandi	ng data, their conte	ent and their
application in are	eas such as data mining and machine learning. Within the course, students will be introduced to exploratory data analysis, preproces	sing, and ways of v	isualizing
different kinds of da	ata such as text, social networks, time series or basic image data processing. Students will get hands-on experience in applications of	selected methods t	o real-world
	examples in the Python programming language.		
BI-VMM	Selected Mathematical Methods	Z,ZK	4
The lecture begins	s with an introduction to the analysis of complex functions of a complex variable. Next, we present the Lebesgue integral. We then ad	dress Fourier serie	s and their
properties. Furthe	r, we introduce and study the properties of the Discrete Fourier Transform (DFT) and its fast implementation (FFT). We discuss the w	avelet transform. W	le examine
t	he linear programming problem in more detail and its solution using the Simplex algorithm. Each topic is demonstrated with interestin	ng examples.	
BI-VPS.21	Selected Topics in Computer Networking	Z,ZK	5
The course builds u	ipon the Computer Networks course (BI-PSI), obligatory for the program. Students will learn in detail principles, protocols, and technology	gies used in mode	n computer
networks from loc	al area networks up to Internet, with focus on switching, routing, security, and virtualization. The emphasis will be on gaining practica	I experience with re	al network
	vices in the lab and learning important methods of local area and wide area networks from the viewpoint of functionality, performance	e, and security.	
BI-VR1	Virtual reality I	KZ	4
	al Reality (VR), virtual reality operating system and virtual reality creation. Another objective is to meet the rules and requirements of		
The course focus	es on the ways of teaching using virtual reality technologies and interactive activities in educational virtual 3D worlds. It improves con	nputational thinking	, empathy
	and shared social activities.		
BI-VR2	Virtual reality II	KZ	3
Continuation of the	course Virtual Reality I. The new course focuses on collaborative telepresence, spatial computing and social life of avatars. The obje	ctive is to develop	applications
DUNANA	for computer science and gamification in various social metaverse and desktop engines.		
BI-VWM.21	Searching the Web and Multimedia Databases	Z,ZK	5
-	c overview about search techniques in the web environment that is interpreted as a very large distributed and heterogeneous storag		
			-
knowlodge of simils	nformation about search techniques in text and hypertext documents (the web pages themselves) and about feature extraction from	web pages. They g	et detailed
knowledge of simila	arity search in multimedia databases (generally in collections of unstructured data). They also learn techniques for programming web se	web pages. They g	et detailed
	arity search in multimedia databases (generally in collections of unstructured data). They also learn techniques for programming web se data types (documents).	web pages. They g arch engines for the	et detailed mentioned
BI-ZIVS	arity search in multimedia databases (generally in collections of unstructured data). They also learn techniques for programming web se data types (documents). Intelligent Embedded System Fundamentals	web pages. They g arch engines for the KZ	et detailed e mentioned 4
BI-ZIVS Intelligent embedd	arity search in multimedia databases (generally in collections of unstructured data). They also learn techniques for programming web se data types (documents). Intelligent Embedded System Fundamentals ed system fundamentals course is focused on high-level technology embedded systems integrating artificial intelligence. The aim of t	web pages. They g arch engines for the KZ the course is to tea	et detailed mentioned 4 ch students
BI-ZIVS Intelligent embedd modern humanoid	arity search in multimedia databases (generally in collections of unstructured data). They also learn techniques for programming web se data types (documents). Intelligent Embedded System Fundamentals ed system fundamentals course is focused on high-level technology embedded systems integrating artificial intelligence. The aim of t robot control and development of applications in a graphical development environment. Lectures provide fundamentals of motion cont	web pages. They g arch engines for the KZ the course is to tea rol, sensor reading.	et detailed e mentioned 4 ch students application
BI-ZIVS Intelligent embedd modern humanoid	arity search in multimedia databases (generally in collections of unstructured data). They also learn techniques for programming web se data types (documents). Intelligent Embedded System Fundamentals ed system fundamentals course is focused on high-level technology embedded systems integrating artificial intelligence. The aim of t robot control and development of applications in a graphical development environment. Lectures provide fundamentals of motion cont avigation and development tools. In labs, students program a set of basic task by using the robot simulator and real hardware to get p	web pages. They g arch engines for the KZ the course is to tea rol, sensor reading.	et detailed e mentioned 4 ch students application
BI-ZIVS Intelligent embedd modern humanoid interfaces, robot na	arity search in multimedia databases (generally in collections of unstructured data). They also learn techniques for programming web se data types (documents). Intelligent Embedded System Fundamentals ed system fundamentals course is focused on high-level technology embedded systems integrating artificial intelligence. The aim of to robot control and development of applications in a graphical development environment. Lectures provide fundamentals of motion cont avigation and development tools. In labs, students program a set of basic task by using the robot simulator and real hardware to get p technologies.	web pages. They g arch engines for the KZ the course is to tea rol, sensor reading, practical experience	et detailed e mentioned 4 ch students application e with these
BI-ZIVS Intelligent embedd modern humanoid interfaces, robot na BI-ZNF	Arity search in multimedia databases (generally in collections of unstructured data). They also learn techniques for programming web se data types (documents). Intelligent Embedded System Fundamentals ed system fundamentals course is focused on high-level technology embedded systems integrating artificial intelligence. The aim of the robot control and development of applications in a graphical development environment. Lectures provide fundamentals of motion cont avigation and development tools. In labs, students program a set of basic task by using the robot simulator and real hardware to get p technologies. PHP Framework Nette - basics	web pages. They g arch engines for the KZ the course is to tea rol, sensor reading, practical experience KZ	et detailed e mentioned 4 ch students application e with these 3
BI-ZIVS Intelligent embedd modern humanoid interfaces, robot na BI-ZNF	arity search in multimedia databases (generally in collections of unstructured data). They also learn techniques for programming web se data types (documents). Intelligent Embedded System Fundamentals ed system fundamentals course is focused on high-level technology embedded systems integrating artificial intelligence. The aim of to robot control and development of applications in a graphical development environment. Lectures provide fundamentals of motion cont avigation and development tools. In labs, students program a set of basic task by using the robot simulator and real hardware to get p technologies.	web pages. They g arch engines for the KZ the course is to tea rol, sensor reading, practical experience KZ	et detailed e mentioned 4 ch students application e with these 3
BI-ZIVS Intelligent embedd modern humanoid interfaces, robot na BI-ZNF Students will gain t	arity search in multimedia databases (generally in collections of unstructured data). They also learn techniques for programming web se data types (documents). Intelligent Embedded System Fundamentals ed system fundamentals course is focused on high-level technology embedded systems integrating artificial intelligence. The aim of t robot control and development of applications in a graphical development environment. Lectures provide fundamentals of motion contravigation and development tools. In labs, students program a set of basic task by using the robot simulator and real hardware to get p technologies. PHP Framework Nette - basics he basics of PHP framework Nette. They will learn how to practically work with MVP architecture and various libraries of this Czech po knowledge should serve for the efficient creation of a web backend in PHP language.	web pages. They g arch engines for the KZ the course is to tea rol, sensor reading, oractical experience KZ opular framework. T	et detailed e mentioned 4 ch students application e with these 3 he resulting
BI-ZIVS Intelligent embedd modern humanoid interfaces, robot na BI-ZNF Students will gain t BI-ZNS.21	arity search in multimedia databases (generally in collections of unstructured data). They also learn techniques for programming web se data types (documents). Intelligent Embedded System Fundamentals ed system fundamentals course is focused on high-level technology embedded systems integrating artificial intelligence. The aim of to robot control and development of applications in a graphical development environment. Lectures provide fundamentals of motion cont avigation and development tools. In labs, students program a set of basic task by using the robot simulator and real hardware to get p technologies. PHP Framework Nette - basics he basics of PHP framework Nette. They will learn how to practically work with MVP architecture and various libraries of this Czech po	web pages. They g arch engines for the KZ the course is to tea rol, sensor reading, oractical experience KZ pular framework. T Z,ZK	et detailed e mentioned 4 ch students application e with these 3 he resulting 5
BI-ZIVS Intelligent embedd modern humanoid interfaces, robot na BI-ZNF Students will gain t BI-ZNS.21 Students will becor	arity search in multimedia databases (generally in collections of unstructured data). They also learn techniques for programming web se data types (documents). Intelligent Embedded System Fundamentals ed system fundamentals course is focused on high-level technology embedded systems integrating artificial intelligence. The aim of the robot control and development of applications in a graphical development environment. Lectures provide fundamentals of motion contrat avigation and development tools. In labs, students program a set of basic task by using the robot simulator and real hardware to get p technologies. PHP Framework Nette - basics he basics of PHP framework Nette. They will learn how to practically work with MVP architecture and various libraries of this Czech po knowledge should serve for the efficient creation of a web backend in PHP language. Knowledge-based Systems	web pages. They g arch engines for the KZ the course is to tea rol, sensor reading, oractical experience KZ pular framework. T Z,ZK Iligence to solve pr	et detailed e mentioned 4 ch students application e with these 3 he resulting 5 oblems that
BI-ZIVS Intelligent embedd modern humanoid interfaces, robot na BI-ZNF Students will gain t BI-ZNS.21 Students will becor require human judg	arity search in multimedia databases (generally in collections of unstructured data). They also learn techniques for programming web se data types (documents). Intelligent Embedded System Fundamentals ed system fundamentals course is focused on high-level technology embedded systems integrating artificial intelligence. The aim of the robot control and development of applications in a graphical development environment. Lectures provide fundamentals of motion contrat avigation and development tools. In labs, students program a set of basic task by using the robot simulator and real hardware to get p technologies. PHP Framework Nette - basics he basics of PHP framework Nette. They will learn how to practically work with MVP architecture and various libraries of this Czech po knowledge should serve for the efficient creation of a web backend in PHP language. Knowledge-based Systems me familiar with the systems based on knowledge (knowledge-based systems), which are systems that usetechniques of artificial inte	web pages. They g arch engines for the KZ the course is to tea rol, sensor reading, oractical experience KZ pular framework. T Z,ZK Illigence to solve pr dge-based system	et detailed e mentioned 4 ch students application e with these 3 he resulting 5 oblems that
BI-ZIVS Intelligent embedd modern humanoid interfaces, robot na BI-ZNF Students will gain t BI-ZNS.21 Students will becor require human judg	arity search in multimedia databases (generally in collections of unstructured data). They also learn techniques for programming web se data types (documents). Intelligent Embedded System Fundamentals ed system fundamentals course is focused on high-level technology embedded systems integrating artificial intelligence. The aim of the robot control and development of applications in a graphical development environment. Lectures provide fundamentals of motion contrat avigation and development tools. In labs, students program a set of basic task by using the robot simulator and real hardware to get p technologies. PHP Framework Nette - basics he basics of PHP framework Nette. They will learn how to practically work with MVP architecture and various libraries of this Czech po knowledge should serve for the efficient creation of a web backend in PHP language. Knowledge-based Systems me familiar with the systems based on knowledge (knowledge-based systems), which are systems that usetechniques of artificial integrament, learning and reasoning from findingsand actions. The course introduces students to the philosophy and architecture of knowledge metricular integrament, learning and reasoning from findingsand actions. The course introduces students to the philosophy and architecture of knowledge metricular integrament is the philosophy and architecture of knowledge integrations in the philosophy and architecture of knowledge integrations in the philosophy and architecture of knowledge integrations integrations in the philosophy and architecture of knowledge integrations integrations in the philosophy and architecture of knowledge integrations integrations integrations integrations integrations integrations integrations in the philosophy and architecture of knowledge integrations integrations integrations integrations in the philosophy and architecture of knowledge integrations in the philosophy integrations in the philosophy integrations integrations in the philosophy integrations in the philosophy integrations in the	web pages. They g arch engines for the KZ the course is to tea rol, sensor reading, oractical experience KZ pular framework. T Z,ZK Illigence to solve pr dge-based system	et detailed e mentioned 4 ch students application e with these 3 he resulting 5 oblems that
BI-ZIVS Intelligent embedd modern humanoid interfaces, robot na BI-ZNF Students will gain t BI-ZNS.21 Students will becor require human judg de BI-ZPI	arity search in multimedia databases (generally in collections of unstructured data). They also learn techniques for programming web se data types (documents). Intelligent Embedded System Fundamentals ed system fundamentals course is focused on high-level technology embedded systems integrating artificial intelligence. The aim of t robot control and development of applications in a graphical development environment. Lectures provide fundamentals of motion cont avigation and development tools. In labs, students program a set of basic task by using the robot simulator and real hardware to get p technologies. PHP Framework Nette - basics he basics of PHP framework Nette. They will learn how to practically work with MVP architecture and various libraries of this Czech po knowledge should serve for the efficient creation of a web backend in PHP language. Knowledge-based Systems ne familiar with the systems based on knowledge (knowledge-based systems), which are systems that usetechniques of artificial inte greent, learning and reasoning from findingsand actions. The course introduces students to the philosophy and architecture of knowle cision-makingand planning. The course assumes knowledge of set theory, probability theory, artificial neural networks, and evolutional	web pages. They g arch engines for the KZ the course is to tea rol, sensor reading, oractical experience KZ opular framework. T Z,ZK Iligence to solve pr rdge-based system ary algorithms. KZ	et detailed e mentioned 4 ch students application e with these 3 he resulting 5 oblems that s to support 4
BI-ZIVS Intelligent embedd modern humanoid interfaces, robot na BI-ZNF Students will gain t BI-ZNS.21 Students will becor require human judg de BI-ZPI Students will learn	arity search in multimedia databases (generally in collections of unstructured data). They also learn techniques for programming web se data types (documents). Intelligent Embedded System Fundamentals ed system fundamentals course is focused on high-level technology embedded systems integrating artificial intelligence. The aim of t robot control and development of applications in a graphical development environment. Lectures provide fundamentals of motion cont avigation and development tools. In labs, students program a set of basic task by using the robot simulator and real hardware to get p technologies. PHP Framework Nette - basics he basics of PHP framework Nette. They will learn how to practically work with MVP architecture and various libraries of this Czech po knowledge should serve for the efficient creation of a web backend in PHP language. Knowledge-based Systems ne familiar with the systems based on knowledge (knowledge-based systems), which are systems that usetechniques of artificial inte greent, learning and reasoning from findingsand actions. The course introduces students to the philosophy and architecture of knowle cision-makingand planning. The course assumes knowledge of set theory, probability theory, artificial neural networks, and evolution Process engineering	web pages. They g arch engines for the KZ the course is to tea rol, sensor reading, oractical experience KZ opular framework. T Z,ZK Iligence to solve pr dge-based system ary algorithms. KZ orocess modelling a	et detailed e mentioned 4 ch students application e with these 3 he resulting 5 oblems that s to support 4 and they will
BI-ZIVS Intelligent embedd modern humanoid interfaces, robot na BI-ZNF Students will gain t BI-ZNS.21 Students will becor require human judg de BI-ZPI Students will learn learn basics of the	arity search in multimedia databases (generally in collections of unstructured data). They also learn techniques for programming web se data types (documents). Intelligent Embedded System Fundamentals ed system fundamentals course is focused on high-level technology embedded systems integrating artificial intelligence. The aim of to robot control and development of applications in a graphical development environment. Lectures provide fundamentals of motion cont avigation and development tools. In labs, students program a set of basic task by using the robot simulator and real hardware to get p technologies. PHP Framework Nette - basics he basics of PHP framework Nette. They will learn how to practically work with MVP architecture and various libraries of this Czech po knowledge should serve for the efficient creation of a web backend in PHP language. Knowledge-based Systems me familiar with the systems based on knowledge (knowledge-based Systems), which are systems that usetechniques of artificial integration greent, learning and reasoning from findingsand actions. The course introduces students to the philosophy and architecture of knowle cision-makingand planning. The course assumes knowledge of set theory, probability theory, artificial neural networks, and evolutiona Process engineering fundamentals of process engineering in this subject. Students will get necessary foundations for understanding formal principles of p used notations (UML, BPMN, BORM). The focus in this subject lies in training of practical skills of formalisation and modelling of bus be of process engineering for information systems development is discussed as well as its importance in the overall context of inform	web pages. They g arch engines for the KZ the course is to tea rol, sensor reading, oractical experience KZ opular framework. T Z,ZK Iligence to solve pr adge-based system ary algorithms. KZ orocess modelling a iness processes us	et detailed e mentioned 4 ch students application e with these 3 he resulting 5 oblems that s to support 4 and they will ing modern
BI-ZIVS Intelligent embedd modern humanoid interfaces, robot na BI-ZNF Students will gain t BI-ZNS.21 Students will becor require human judg de BI-ZPI Students will learn learn basics of the CASE tools. The ro	arity search in multimedia databases (generally in collections of unstructured data). They also learn techniques for programming web se data types (documents). Intelligent Embedded System Fundamentals ed system fundamentals course is focused on high-level technology embedded systems integrating artificial intelligence. The aim of to robot control and development of applications in a graphical development environment. Lectures provide fundamentals of motion cont avigation and development tools. In labs, students program a set of basic task by using the robot simulator and real hardware to get p technologies. PHP Framework Nette - basics he basics of PHP framework Nette. They will learn how to practically work with MVP architecture and various libraries of this Czech po knowledge should serve for the efficient creation of a web backend in PHP language. Knowledge-based Systems ne familiar with the systems based on knowledge (knowledge-based Systems), which are systems that usetechniques of artificial integrated in the systems based on knowledge of set theory, probability theory, artificial neural networks, and evolutiona Process engineering fundamentals of process engineering in this subject. Students will get necessary foundations for understanding formal principles of p used notations (UML, BPMN, BORM). The focus in this subject lies in training of practical skills of formalisation and modelling of bus be of process engineering for information systems development is discussed as well as its importance in the overall context of inform an enterprise.	web pages. They g arch engines for the KZ the course is to tea rol, sensor reading, practical experience KZ pular framework. T Z,ZK Iligence to solve pr dge-based system ary algorithms. KZ process modelling a iness processes us lation and business	et detailed e mentioned 4 ch students application e with these 3 he resulting 5 oblems that s to support 4 and they will ing modern strategy of
BI-ZIVS Intelligent embedd modern humanoid interfaces, robot na BI-ZNF Students will gain t BI-ZNS.21 Students will becor require human judg de BI-ZPI Students will learn learn basics of the CASE tools. The ro	arity search in multimedia databases (generally in collections of unstructured data). They also learn techniques for programming web se data types (documents). Intelligent Embedded System Fundamentals ed system fundamentals course is focused on high-level technology embedded systems integrating artificial intelligence. The aim of the robot control and development of applications in a graphical development environment. Lectures provide fundamentals of motion cont avigation and development tools. In labs, students program a set of basic task by using the robot simulator and real hardware to get prechologies. PHP Framework Nette - basics the basics of PHP framework Nette. They will learn how to practically work with MVP architecture and various libraries of this Czech point with the systems based on knowledge (knowledge-based Systems), which are systems that usetechniques of artificial integration in the systems have a downowledge of set theory, probability theory, artificial neural networks, and evolutions Process engineering fundamentals of process engineering in this subject. Students will get necessary foundations for understanding formal principles of process engineering for information systems development is discussed as well as its importance in the overall context of inform an enterprise. Basics of System Control	web pages. They g arch engines for the KZ the course is to tea rol, sensor reading, practical experience KZ pular framework. T Z,ZK Iligence to solve pr dge-based system ary algorithms. KZ process modelling a iness processes us lation and business Z,ZK	et detailed e mentioned 4 ch students application e with these 3 he resulting 5 oblems that s to support 4 and they will ing modern strategy of 5
BI-ZIVS Intelligent embedd modern humanoid interfaces, robot na BI-ZNF Students will gain t BI-ZNS.21 Students will becor require human judg de BI-ZPI Students will learn learn basics of the CASE tools. The ro BI-ZRS.21 The course gives	arity search in multimedia databases (generally in collections of unstructured data). They also learn techniques for programming web se data types (documents). Intelligent Embedded System Fundamentals ed system fundamentals course is focused on high-level technology embedded systems integrating artificial intelligence. The aim of to robot control and development of applications in a graphical development environment. Lectures provide fundamentals of motion cont avigation and development tools. In labs, students program a set of basic task by using the robot simulator and real hardware to get p technologies. PHP Framework Nette - basics he basics of PHP framework Nette. They will learn how to practically work with MVP architecture and various libraries of this Czech po knowledge should serve for the efficient creation of a web backend in PHP language. Knowledge-based Systems me familiar with the systems based on knowledge (knowledge-based Systems) me familiar with the systems based on knowledge (knowledge-based Systems) fundamentals of process engineering from findingsand actions. The course introduces students to the philosophy and architecture of knowle cision-makingand planning. The course assumes knowledge of set theory, probability theory, artificial neural networks, and evolutions process engineering fundamentals of process engineering in this subject. Students will get necessary foundations for understanding formal principles of p used notations (UML, BPMN, BORM). The focus in this subject lies in training of practical skills of formalisation and modelling of bus ple of process engineering for information systems development is discussed as well as its importance in the overall context of inform an enterprise. Basics of System Control an introduction to the field of automatic control. Students will gain knowledge in this rapidly evolving field of great future. We will focu	web pages. They g arch engines for the KZ the course is to tea rol, sensor reading, practical experience KZ pular framework. T Z,ZK illigence to solve pr dge-based system ary algorithms. KZ process modelling a iness processes us lation and business Z,ZK s our attention part	et detailed e mentioned 4 ch students application e with these 3 he resulting 5 oblems that s to support 4 and they will ing modern strategy of 5 icularly on
BI-ZIVS Intelligent embedd modern humanoid interfaces, robot na BI-ZNF Students will gain t BI-ZNS.21 Students will becor require human judg de BI-ZPI Students will learn learn basics of the CASE tools. The ro BI-ZRS.21 The course gives control of enginee	arity search in multimedia databases (generally in collections of unstructured data). They also learn techniques for programming web se data types (documents). Intelligent Embedded System Fundamentals ed system fundamentals course is focused on high-level technology embedded systems integrating artificial intelligence. The aim of the robot control and development of applications in a graphical development environment. Lectures provide fundamentals of motion cont avigation and development tools. In labs, students program a set of basic task by using the robot simulator and real hardware to get pre- technologies. PHP Framework Nette - basics he basics of PHP framework Nette. They will learn how to practically work with MVP architecture and various libraries of this Czech po- knowledge should serve for the efficient creation of a web backend in PHP language. Knowledge-based Systems me familiar with the systems based on knowledge (knowledge-based systems), which are systems that usetechniques of artificial integration. Process engineering fundamentals of process engineering in this subject. Students will get necessary foundations for understanding formal principles of process engineering in this subject. Students will get necessary foundations for understanding formal principles of process engineering in this subject. Students will get necessary foundations for on and modelling of bus an enterprise. Basics of System Control an introduction to the field of automatic control. Students will gain knowledge in this rapidly evolving field of great future. We will focu- ering and physical systems. We will provide basic information from the feedback control of linear dynamical SISO systems, description are provide as systems. We will provide basic information from the feedback control of linear dynamical SISO systems, description and physical systems. We will provide basic information from the feedback control of linear dynamical SISO systems, description and physical systems. We will provide basic information from the fee	web pages. They g arch engines for the KZ the course is to tea rol, sensor reading, practical experience KZ pular framework. T Z,ZK liligence to solve pr dge-based system ary algorithms. KZ process modelling a iness processes us lation and business Z,ZK s our attention part n methods of syste	et detailed e mentioned 4 ch students application e with these 3 he resulting 5 oblems that s to support 4 and they will ing modern strategy of 5 icularly on m models,
BI-ZIVS Intelligent embedd modern humanoid interfaces, robot na BI-ZNF Students will gain t BI-ZNS.21 Students will becor require human judg de BI-ZPI Students will learn learn basics of the CASE tools. The ro BI-ZRS.21 The course gives control of enginee basic linear dynam	arity search in multimedia databases (generally in collections of unstructured data). They also learn techniques for programming web se data types (documents). Intelligent Embedded System Fundamentals ed system fundamentals course is focused on high-level technology embedded systems integrating artificial intelligence. The aim of 1 robot control and development of applications in a graphical development environment. Lectures provide fundamentals of motion cont avigation and development tools. In labs, students program a set of basic task by using the robot simulator and real hardware to get p technologies. PHP Framework Nette - basics he basics of PHP framework Nette. They will learn how to practically work with MVP architecture and various libraries of this Czech po knowledge should serve for the efficient creation of a web backend in PHP language. Knowledge-based Systems ne familiar with the systems based on knowledge (knowledge-based Systems) which are systems that usetechniques of artificial integration and real networks, and evolution from findingsand actions. The course introduces students to the philosophy and architecture of knowle cision-makingand planning. The course assumes knowledge of set theory, probability theory, artificial neural networks, and evolution Process engineering fundamentals of process engineering in this subject. Students will get necessary foundations for understanding formal principles of p used notations (UML, BPMN, BORM). The focus in this subject lies in training of practical skills of formalisation and modelling of bus le of process engineering for information systems development is discussed as well as its importance in the overall context of inform an enterprise. Basics of System Control an introduction to the field of automatic control. Students will gain knowledge in this rapidly evolving field of great future. We will focu ering and physical systems. We will provide basic information from the feedback control of linear dynamical SISO systems, descriptio ic systems analysi	web pages. They g arch engines for the KZ the course is to tea rol, sensor reading, practical experience KZ opular framework. T Z,ZK liligence to solve pr dge-based system ary algorithms. KZ process modelling a iness processes us lation and business Z,ZK s our attention part n methods of syste ing a description of	et detailed e mentioned 4 ch students application e with these 3 he resulting 5 oblems that s to support 4 and they will ing modern strategy of 5 icularly on m models, the system
BI-ZIVS Intelligent embedd modern humanoid interfaces, robot na BI-ZNF Students will gain t BI-ZNS.21 Students will becor require human judg de BI-ZPI Students will learn learn basics of the CASE tools. The ro BI-ZRS.21 The course gives control of enginee basic linear dynam model, the basic	trity search in multimedia databases (generally in collections of unstructured data). They also learn techniques for programming web se data types (documents). Intelligent Embedded System Fundamentals ed system fundamentals course is focused on high-level technology embedded systems integrating artificial intelligence. The aim of 1 robot control and development of applications in a graphical development environment. Lectures provide fundamentals of motion cont avigation and development tools. In labs, students program a set of basic task by using the robot simulator and real hardware to get p technologies. PHP Framework Nette - basics he basics of PHP framework Nette. They will learn how to practically work with MVP architecture and various libraries of this Czech pc knowledge should serve for the efficient creation of a web backend in PHP language. Knowledge-based Systems ne familiar with the systems based on knowledge (knowledge-based systems), which are systems that usetechniques of artificial integrate, learning and reasoning from findingsand actions. The course introduces students of the optilosophy and architecture of knowledge ision-makingand planning. The course assumes knowledge of set theory, probability theory, artificial neural networks, and evolutions Process engineering fundamentals of process engineering in this subject. Students will get necessary foundations for understanding formal principles of p used notations (UML, BPMN, BORM). The focus in this subject lies in training of practical skills of formalisation and modelling of bus be of process engineering for information systems development is discussed as well as its importance in the overall context of inform an enterprise. Basics of System Control an introduction to the field of automatic control. Students will gain knowledge in this rapidly evolving field of great future. We will focu ring and physical systems analysis and design verification, simple PID feedback, PSD, and fuzzy controllers. Attention is also giver ing and physical syst	web pages. They g arch engines for the KZ the course is to tea rol, sensor reading, practical experience KZ pular framework. T Z,ZK liligence to solve pr dge-based system ary algorithms. KZ process modelling a iness processes us lation and business Z,ZK s our attention part n methods of syste ing a description of n to sensors and ac	et detailed e mentioned 4 ch students application e with these 3 he resulting 5 oblems that s to support 4 and they will ing modern strategy of 5 icularly on m models, the system tuators in
BI-ZIVS Intelligent embedd modern humanoid interfaces, robot na BI-ZNF Students will gain t BI-ZNS.21 Students will becor require human judg de BI-ZPI Students will learn learn basics of the CASE tools. The ro BI-ZRS.21 The course gives control of enginee basic linear dynam model, the basic	arity search in multimedia databases (generally in collections of unstructured data). They also learn techniques for programming web se data types (documents). Intelligent Embedded System Fundamentals ed system fundamentals course is focused on high-level technology embedded systems integrating artificial intelligence. The aim of 1 robot control and development of applications in a graphical development environment. Lectures provide fundamentals of motion cont avigation and development tools. In labs, students program a set of basic task by using the robot simulator and real hardware to get p technologies. PHP Framework Nette - basics he basics of PHP framework Nette. They will learn how to practically work with MVP architecture and various libraries of this Czech pc knowledge should serve for the efficient creation of a web backend in PHP language. Knowledge-based systems), which are systems that usetechniques of artificial intel greent, learning and reasoning from findingsand actions. The course introduces students to the philosophy and architecture of knowled cision-makingand planning. The course assumes knowledge of set theory, probability theory, artificial neural networks, and evolutions Process engineering fundamentals of process engineering in this subject. Students will get necessary foundations for understanding formal principles of p used notations (UML, BPMN, BORM). The focus in this subject lies in training of practical skills of formalisation and modelling of bus an enterprise. Basics of System Control an introduction to the field of automatic control. Students will gain knowledge in this rapidly evolving field of great future. We will focu ic systems analysis and design verification, simple PID feedback, PSD, and fuzzy controlleers. Attention is also giver es of stability in control systems, single and continuous adjustment of the controller parameters, and certain aspects of the industrial	web pages. They g arch engines for the KZ the course is to tea rol, sensor reading, practical experience KZ pular framework. T Z,ZK liligence to solve pr dge-based system ary algorithms. KZ process modelling a iness processes us lation and business Z,ZK s our attention part n methods of syste ing a description of n to sensors and ac	et detailed e mentioned 4 ch students application e with these 3 he resulting 5 oblems that s to support 4 and they will ing modern strategy of 5 icularly on m models, the system tuators in
BI-ZIVS Intelligent embedd modern humanoid interfaces, robot na BI-ZNF Students will gain t BI-ZNS.21 Students will becor require human judg de BI-ZPI Students will learn learn basics of the CASE tools. The ro BI-ZRS.21 The course gives control of enginee basic linear dynam model, the basic control loops, issu	The search in multimedia databases (generally in collections of unstructured data). They also learn techniques for programming web se data types (documents). Intelligent Embedded System Fundamentals ed system fundamentals course is focused on high-level technology embedded systems integrating artificial intelligence. The aim of 1 robot control and development of applications in a graphical development environment. Lectures provide fundamentals of motion cont avigation and development tools. In labs, students program a set of basic task by using the robot simulator and real hardware to get p technologies. PHP Framework Nette - basics he basics of PHP framework Nette. They will learn how to practically work with MVP architecture and various libraries of this Czech pc knowledge should serve for the efficient creation of a web backend in PHP language. Knowledge-based Systems ne familiar with the systems based on knowledge (knowledge-based Systems), which are systems that usetechniques of artificial inte greent, learning and reasoning from findingsand actions. The course introduces students to the philosophy and architecture of knowle cision-makingand planning. The course assumes knowledge of set theory, probability theory, artificial neural networks, and evolutions Process engineering fundamentals of process engineering in this subject. Students will get necessary foundations for understanding formal principles of p used notations (UML, BPMN, BORM). The focus in this subject lies in training of practical skills of formalisation and modelling of bus an enterprise. Basics of System Control an introduction to the field of automatic control. Students will gain knowledge in this rapidly evolving field of great future. We will focu ring and physical systems. We will provide basic information from the feedback, cPSD, and fuzzy control lers. Attention is also giver an enterprise. Basics of System Control an introduction to the field of automatic control. Students will gain knowledge in this rapidly evolving field of great	web pages. They g arch engines for the KZ the course is to tea rol, sensor reading, practical experience KZ opular framework. T Z,ZK illigence to solve pr dge-based system ary algorithms. KZ process modelling a iness processes us ation and business Z,ZK s our attention part n methods of syste ing a description of to sensors and ac implementation of	et detailed e mentioned 4 ch students application e with these 3 he resulting 5 oblems that s to support 4 and they will ing modern strategy of 5 icularly on m models, the system tuators in continuous
BI-ZIVS Intelligent embedd modern humanoid interfaces, robot na BI-ZNF Students will gain t BI-ZNS.21 Students will becor require human judg de BI-ZPI Students will learn learn basics of the CASE tools. The ro BI-ZRS.21 The course gives control of enginee basic linear dynam model, the basic control loops, issu	rity search in multimedia databases (generally in collections of unstructured data). They also learn techniques for programming web se data types (documents). Intelligent Embedded System Fundamentals ed system fundamentals course is focused on high-level technology embedded systems integrating artificial intelligence. The aim of to robot control and development of applications in a graphical development environment. Lectures provide fundamentals of motion cont avigation and development tools. In labs, students program a set of basic task by using the robot simulator and real hardware to get p technologies. PHP Framework Nette - basics he basics of PHP framework Nette. They will learn how to practically work with MVP architecture and various libraries of this Czech po knowledge should serve for the efficient creation of a web backend in PHP language. Knowledge-based Systems me familiar with the systems based on knowledge (knowledge-based systems), which are systems that usetechniques of artificial inte memt, learning and reasoning from findingsand actions. The course introduces students to the philosophy and architecture of knowle cision-makingand planning. The course assumes knowledge of set theory, probability theory, artificial neural networks, and evolutions Process engineering fundamentals of process engineering in this subject. Students will get necessary foundations for understanding formal principles of p used notations (UML, BPMN, BORM). The focus in this subject lies in training of practical skills of formalisation and modelling of bus lee of process engineering for information systems development is discussed as well as its importance in the overall context of inform an enterprise. Basics of System Control an introduction to the field of automatic control. Students will gain knowledge in this rapidly evolving field of great future. We will focu ring and physical systems. We will provide basic information from the feedback, PSD, and fuzzy controllers. Attention is also giver es of stability in control	web pages. They g arch engines for the KZ the course is to tea rol, sensor reading, practical experience KZ opular framework. T Z,ZK illigence to solve pr dge-based system ary algorithms. KZ process modelling a iness processes us tation and business Z,ZK s our attention part n methods of syste ing a description of to sensors and ac implementation of Z	et detailed e mentioned 4 ch students application e with these 3 he resulting 5 oblems that s to support 4 and they will ing modern strategy of 5 icularly on m models, the system tuators in continuous 10
BI-ZIVS Intelligent embedd modern humanoid interfaces, robot na BI-ZNF Students will gain t BI-ZNS.21 Students will becor require human judg de BI-ZPI Students will learn learn basics of the CASE tools. The ro BI-ZRS.21 The course gives control of enginee basic linear dynam model, the basic control loops, issu BI-ZS10 Each student car	A system fundamentals caures is focused on high-level technology embedded systems integrating artificial intelligence. The aim of the development of applications in a graphical development environment. Lectures provide fundamentals of motion control and development tools. In labs, students program a set of basic task by using the robot simulator and real hardware to get the basics of PHP framework Nette. They will learn how to practically work with MVP architecture and various libraries of this Czech por knowledge should serve for the efficient creation of a web backend in PHP language. Knowledge-based Systems are students or a students or for a web backend in PHP language. Knowledge-based Systems are students of process engineering in this subject. Students will get necessary foundations for understanding formal principles of process engineering in this subject. Students will get necessary foundations for understanding formal principles of process engineering in this subject. Students will get necessary foundations for understanding formal principles of process engineering in this subject. Students will get necessary foundations for understanding formal principles of process engineering in this subject. Students will get necessary foundations for understanding formal principles of process engineering for information systems development is discussed as well as its importance in the overall context of inform an enterprise. Basics of System Control an enterprise. Basics of System Control end devide back control of finear dynamical SISO systems, description is systems analysis and design verification and simple PID feedback, PSD, and fuzzy controllers. Attention is also giver es of stability in control systems, single and continuous adjustment of the control redits and design verification and simple PID feedback, PSD, and fuzzy controllers. Attention is also giver es of stability in control systems, single and continuous adjustment of the control control. Bachelor internship abroad for 10 credits on the foreign sc	web pages. They g arch engines for the KZ the course is to tea rol, sensor reading, practical experience KZ opular framework. T Z,ZK elligence to solve pr dge-based system ary algorithms. KZ process modelling a iness processes us tation and business Z,ZK s our attention part n methods of syste ing a description of to sensors and ac implementation of Z esearch institution.	et detailed e mentioned 4 ch students application e with these 3 he resulting 5 oblems that s to support 4 and they will ing modern strategy of 5 icularly on m models, the system tuators in continuous 10 Before the
BI-ZIVS Intelligent embedd modern humanoid interfaces, robot na BI-ZNF Students will gain t BI-ZNS.21 Students will becor require human judg de BI-ZPI Students will learn learn basics of the CASE tools. The ro BI-ZRS.21 The course gives control of enginee basic linear dynam model, the basic control loops, issu BI-ZS10 Each student car internship the Des	rity search in multimedia databases (generally in collections of unstructured data). They also learn techniques for programming web se data types (documents). Intelligent Embedded System Fundamentals ed system fundamentals course is focused on high-level technology embedded systems integrating artificial intelligence. The aim of trobot control and development of applications in a graphical development environment. Lectures provide fundamentals of motion cont avigation and development tools. In labs, students program a set of basic task by using the robot simulator and real hardware to get technologies. PHP Framework Nette - basics he basics of PHP framework Nette. They will learn how to practically work with MVP architecture and various libraries of this Czech po knowledge should serve for the efficient creation of a web backend in PHP language. Knowledge-based Systems ne familiar with the systems based on knowledge (knowledge-based Systems), which are systems that usetechniques of artificial inte greent, learning and reasoning from findingsand actions. The course introduces students to the philosophy and architecture of knowle cision-makingand planning. The course assumes knowledge of set theory, probability theory, artificial neural networks, and evolutions Process engineering fundamentals of process engineering in this subject. Students will get necessary foundations for understanding formal principles of p used notations (UML, BPMN, BORM). The focus in this subject lies in training of practical skills of formalisation and modelling of bus lee of process engineering for information systems development is discussed as well as its importance in the overall context of inform an enterprise. Basics of System Control an introduction to the field of automatic control. Students will gain knowledge in this rapidly evolving field of great future. We will forcu ring and physical systems. We will provide basic information from the feedback, cPSD, and fuzzy controllers. Attention is also giver es of stability in control	web pages. They g arch engines for the the course is to tea rol, sensor reading, practical experience KZ pular framework. T Z,ZK Iligence to solve pr dge-based system ary algorithms. KZ process modelling a iness processes us tation and business Z,ZK s our attention part n methods of syste ing a description of to sensors and ac implementation of Z esearch institution. I ponal content and ex	et detailed e mentioned 4 ch students application e with these 3 he resulting 5 oblems that s to support 4 and they will ing modern strategy of 5 icularly on m models, the system tuators in continuous 10 Before the tent of the
BI-ZIVS Intelligent embedd modern humanoid interfaces, robot na BI-ZNF Students will gain t BI-ZNS.21 Students will becor require human judg de BI-ZPI Students will learn learn basics of the CASE tools. The ro BI-ZRS.21 The course gives control of enginee basic linear dynam model, the basic control loops, issu BI-ZS10 Each student car internship the Des	A system fundamentals caures is focused on high-level technology embedded systems integrating artificial intelligence. The aim of the development of applications in a graphical development environment. Lectures provide fundamentals of motion control and development tools. In labs, students program a set of basic task by using the robot simulator and real hardware to get the basics of PHP framework Nette. They will learn how to practically work with MVP architecture and various libraries of this Czech por knowledge should serve for the efficient creation of a web backend in PHP language. Knowledge-based Systems are students or a students or for a web backend in PHP language. Knowledge-based Systems are students of process engineering in this subject. Students will get necessary foundations for understanding formal principles of process engineering in this subject. Students will get necessary foundations for understanding formal principles of process engineering in this subject. Students will get necessary foundations for understanding formal principles of process engineering in this subject. Students will get necessary foundations for understanding formal principles of process engineering in this subject. Students will get necessary foundations for understanding formal principles of process engineering for information systems development is discussed as well as its importance in the overall context of inform an enterprise. Basics of System Control an enterprise. Basics of System Control end devide back control of finear dynamical SISO systems, description is systems analysis and design verification and simple PID feedback, PSD, and fuzzy controllers. Attention is also giver es of stability in control systems, single and continuous adjustment of the control remaines, and certain aspects of the industrial and digital control systems analysis and design verification and simple PID feedback, PSD, and fuzzy controllers. Attention is also giver es of stability in control systems, single and ontinuous adjustment of the	web pages. They g arch engines for the the course is to tea rol, sensor reading, practical experience KZ pular framework. T Z,ZK Iligence to solve pr dge-based system ary algorithms. KZ process modelling a iness processes us tation and business Z,ZK s our attention part n methods of syste ing a description of to sensors and ac implementation of Z esearch institution. I ponal content and ex	et detailed e mentioned 4 ch students application e with these 3 he resulting 5 oblems that s to support 4 and they will ing modern strategy of 5 icularly on m models, the system tuators in continuous 10 Before the tent of the

ployment with a foreign institution. The maximum number of credits a student can earn for one internship is 30 credits. This amount can be divided into two subjects if the internship |

chiployment with a	exceeds the academic year's dead-line.		e internanip
BI-ZS20	Bachelor internship abroad for 20 credits	Z	20
	n once within his / her bachelor's study programme have a foreign internship at a foreign university or other foreign scientific and/or r		
	an of the FIT, or the vice-dean for study affairs assesses the professional content. The student must provide evidence of the professi y courses BI-ZS10, BI-ZS20, BI-ZS30 are used used for the evidence and evaluation of the internship in IS KOS. Every 10 credits co		
	foreign institution. The maximum number of credits a student can earn for one internship is 30 credits. This amount can be divided in	-	
	exceeds the academic year's dead-line.		ointornomp
BI-ZS30	Bachelor internship abroad for 30 credits	Z	30
	n once within his / her bachelor's study programme have a foreign internship at a foreign university or other foreign scientific and/or re	1 – 1	
internship the De	an of the FIT, or the vice-dean for study affairs assesses the professional content. The student must provide evidence of the professi	onal content and ex	tent of the
	y courses BI-ZS10, BI-ZS20, BI-ZS30 are used used for the evidence and evaluation of the internship in IS KOS. Every 10 credits co		
employment with a	foreign institution. The maximum number of credits a student can earn for one internship is 30 credits. This amount can be divided in	to two subjects if the	e internship
DI 70D 04	exceeds the academic year's dead-line.	774	-
BI-ZSB.21	Basics of System Security	Z,ZK	5
-	purse is to provide introduction to basic concepts in security of computer systems. Further, the course introduces the basics of forens analysis or incident response. After finishing the course student will get both theoretical and practical knowledge in the area of mode	-	-
ouon do mainaro	as well as skills needed for independent work in the area of operating system security incident analysis.		io occurry,
BI-ZUM.21	Artificial Intelligence Fundamentals	Z,ZK	5
	troduction to artificial intelligence with emphasis on symbolic techniques. The design of an intelligent agent and the techniques needs	1 1	e discussed,
especially at the	decision-making level. The intelligent agent in the context of the course can be represented for example by a physical robot, but also	by a non-physical e	entity, such
	virtual assistant or a character in a computer game. We will not only introduce the basics, but also show the current state-of-the-art of	uring the course.	
BI-ZWU	Introduction to Web and User Interfaces	Z,ZK	4
	This course is presented in Czech.		
BIE-CSI	Introduction to Computer Science	Z	2
	ory class on Elementary Computer Science for broad audiences: bachelor students in computer science, students majoring in other f		
	ool students, anybody with a background in basic math and the desire to understand the absolute basics of computer science. The g rinciples of computer science for students to understand, early on, what computer science is, why things such as high-level program		
	γ are, and even how, on a basic yet representative and practically relevant level. After taking the class, students are able to answer no		
	questions about themselves such as which courses to take next and which books to follow up with, ideally realizing if they are intere	, ,	
	than expected, or even less than before.		
BIE-DIF	Differential equations	Z,ZK	5
This course provide	es a foundational overview of differential equations, starting with basic motivation and examples of ODEs and progressing to essential s	olution methods like	eseparation
	theorems on existence and uniqueness establish when solutions can be guaranteed. Linear and system-based ODEs are covered w		
	rsis, followed by examples of non-linear models such as predator-prey and epidemiological models to showcase real-world application	-	
partial differential	equations (PDEs) extends these concepts to multi-variable contexts. The course will also cover numerical methods for solving ODE and explicit Euler methods, Runge-Kutta methods, and finite element methods for both ODEs and PDEs.	s and PDES, includi	ing implicit
BIE-EEC	English language external certificate	Z	4
	se can be recognized for any active semester after the submission of a certificate certificate that demonstrates their proficiency in Engl	1 – 1	r exceeding
	the B2 level of the Common European Framework of Reference for Languages.		
BIE-IMA2	Introduction to Mathematics 2	Z	2
Students refresh a	nd extend knowledge of elementary functions and their properties. Students understand basic mathematical principles and they are	able to apply them i	in particular
515 050	examples.		
BIE-SEG	Systems Engineering	Z	0
	tory class on systems engineering for bachelor students in computer science. The goal of the class is to introduce basic principles of cessor and memory virtualization. Seeing and actually understanding virtualization is the overarching theme of the class. After taking		
-	difference between processes and threads as well as emulation and virtualization is the overal of the class. After taking		
	parallelism, and how processes and threads synchronize efficiently to overcome concurrency for communication.		
BIE-ZUM	Artificial Intelligence Fundamentals	Z,ZK	4
	luced to the fundamental problems in the Artificial Intelligence, and the basic methods for their solving. It focuses mainly on the classic		eas of state
space search, mult	i-agent systems, game theory, planning, and machine learning. Modern soft-computing methods, including the evolutionary algorithm	ns and the neural ne	etworks, will
	be presented as well.		
FI-TOP	Academic writing	Z	2
-	portant and required part of research activity. It is not only about obtaining research results but also about applying them in the form	-	-
	e useful for students not only in their own publishing activities but also in the preparation of a bachelor's or master's thesis. In the count ticle, what parts such an article should have, and how the peer review process works. Students will also try their hand at presenting an		
	course will be taught in blocks, with one lecture at the beginning of the semester and one practicum in the middle of the semester. D		•
	on the availability of enrolled students.		
FIT-ACM1	Programming Practices 1	KZ	5
	This is a selective course for preparing talented student for representation in international programming contests.		
FIT-ACM2	Programming Practices 2	KZ	5
	This is a selective course for preparing talented student for representation in international programming contests.		
FIT-ACM3	Programming Practices 3	KZ	5
FIT-ACM4	This is a selective course for preparing talented student for representation in international programming contests.		
	Programming Practices 4	KZ	5
FIF : 6 : : -	Programming Practices 4 This is a selective course for preparing talented student for representation in international programming contests.	· · ·	
FIT-ACM5	Programming Practices 4 This is a selective course for preparing talented student for representation in international programming contests. Programming Practices 5	KZ KZ	5 5
	Programming Practices 4 This is a selective course for preparing talented student for representation in international programming contests. Programming Practices 5 This is a selective course for preparing talented student for representation in international programming contests.	KZ	5
FIT-ACM5 FIT-ACM6	Programming Practices 4 This is a selective course for preparing talented student for representation in international programming contests. Programming Practices 5	· · ·	

	Modern IT infrastructure	7 71/	F
FIT-ITI		Z,ZK	5
-	and time-invariable range of software or hardware, this subject tries to explain the issue as a whole and in the context of the time. A mo	-	-
	e as a complex whole, the individual parts of which must be reconciled from different aspects of the view using current technologies.	me proposea solu	MUUT SHOUID
	thus be capable of continuous and economically optimal operation.		
FIT-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		
corruption and eco	nomic development, which are needed for the right investment decision. Seminars help to improve on the knowledge in the form of d	iscussions based of	on individual
	readings. It is advised to take bachelor level of this course BIE-SEP as a prerequisite.		
FITE-EHD	Introduction to European Economic History	Z,ZK	3
The course introdu	ces a selection of themes from the European economic history. It gives the student basic knowledge about forming of the global eco	nomy through the	description
of the key periods	in history. As European countries have been dominant actors in this process it focuses predominantly on their roles in the economic	history. From large	e economic
area of Roman Em	pire to fragmentation of the Middle Ages, from destruction of WWII to the current affairs, the development of modern financial institut	ions is deciphered	. The course
does not cover de	tailed economic history of particular European countries but rather the impact of trade and role of particular events, institutions and c	organizations in his	story. Class
	meetings will consist of a mixture of lecture and discussion.		
NI-AFP	Applied Functional Programming	KZ	5
This course is pres	ented in Czech. Functional programming represents one of the traditional programming paradigms. Traditional and novel functional p	, rogramming langu	ages are on
the rise nowadays	and the functional paradigm becomes an important construct of traditionally imperative languages (C++, C#, Java). As such, master	ing this paradigm	becomes a
	necessary competence of a software engineer: the theory and especially the practice.		
NI-DDM	Distributed Data Mining	KZ	4
	state-of-the-art approaches for distributed data mining and parallelization of machine learning algorithms. Students will gain hands	1	1 -
	amework Apache Spark and with existing distributed DM / ML algorithms. They will learn principles of their parallel implementations a	-	-
	approaches to parallelize other algorithms. The course is prezented in czech language.		
NI-DSP	Database Systems in Practes	Z,ZK	4
N-DOI	This course is presented in Czech.	2,21	-
		7 71/	4
NI-DZO	Digital Image Processing	Z,ZK	4
	nts 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 all		
	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, and		
NI-IAM	Internet and Multimedia	Z,ZK	4
	se is focused on principles and modern technologies for network transmissions of audiovisual (AV) signals. The syllabus includes acq	-	
	signals (output), network communication protocols, device interfaces, codecs, data formats and stereoscopy. We will look at practical u		
audiovisual transm	nissions. Within the labs, students will practically assemble AV transmission chains using HW and SW technologies and verify the eff	ect of various com	nonente on
			-
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 th		-
	for audience.	e scene up to the p	presentation
NI-LSM	for audience. Statistical Modelling Lab	e scene up to the	presentation 5
NI-LSM The subject is orig	for audience. 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	e scene up to the KZ	presentation 5 use of the
NI-LSM The subject is orig	for audience. 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	e scene up to the KZ but on the effective d analyses of their	presentation 5 use of the
NI-LSM The subject is orio available information	for audience. 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 these Statistical Modelling using numpy and scipy. The second half of the semester is focused on the design of methods and algorithms, and At this point, the subject is on the border of own research and may result in the topic of final work (diploma or bachelor these	e scene up to the KZ but on the effective d analyses of their is).	presentation 5 use of the
NI-LSM The subject is orio available informatio NI-MOP	for audience. 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	e scene up to the KZ but on the effective d analyses of their is). KZ	presentation 5 use of the properties. 4
NI-LSM The subject is orio available informatio NI-MOP	for audience. 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 these Statistical Modelling using numpy and scipy. The second half of the semester is focused on the design of methods and algorithms, and At this point, the subject is on the border of own research and may result in the topic of final work (diploma or bachelor these	e scene up to the KZ but on the effective d analyses of their is). KZ	presentation 5 use of the properties. 4
NI-LSM The subject is orio available informatio NI-MOP Object-oriented pro	for audience. 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	e scene up to the KZ but on the effective d analyses of their is). KZ its ability to natura	presentation 5 use of the r properties. 4 al abstraction
NI-LSM The subject is orio available informatio NI-MOP Object-oriented pro is used to build com	for audience. 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 orgramming is currently one of the most widespread paradigms of software creation, especially enterprise information systems, where	e scene up to the KZ but on the effective d analyses of their is). KZ its ability to natura s of design and imp	r properties.
NI-LSM The subject is orio available informatio NI-MOP Object-oriented pro is used to build corr of object systems	for audience. 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 orgramming is currently one of the most widespread paradigms of software creation, especially enterprise information systems, where uplex modern applications. In this course, we build on the knowledge acquired in the course BI-OOP and aim to further deepen the skills	e scene up to the KZ but on the effective d analyses of their is). KZ its ability to natura s of design and imp eeds and areas of	5 e use of the r properties. 4 al abstraction olementation f interest. In
NI-LSM The subject is orio available information NI-MOP Object-oriented pro- is used to build com- of object systems addition to deepeni	for audience. 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 gramming is currently one of the most widespread paradigms of software creation, especially enterprise information systems, where inplex 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 n	e scene up to the KZ but on the effective d analyses of their is). KZ its ability to natura s of design and imp eeds and areas of on interesting proje	5 e use of the r properties. 4 al abstraction olementation f interest. In ects and OO
NI-LSM The subject is orio available information NI-MOP Object-oriented pro- is used to build com- of object systems addition to deepeni	for audience. 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 gramming 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 n ing object programming skills, which are generally applicable in other OO languages, students will also gain the opportunity to work of	e scene up to the KZ but on the effective d analyses of their is). KZ its ability to natura s of design and imp eeds and areas of on interesting proje	5 e use of the r properties. 4 al abstraction olementation f interest. In ects and OO
NI-LSM The subject is orio available information NI-MOP Object-oriented pro- is used to build com- of object systems addition to deepeni- technologies in ter	for audience. 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 orgramming is currently one of the most widespread paradigms of software creation, especially enterprise information systems, where in 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 n ing object programming skills, which are generally applicable in other OO languages, students will also gain the opportunity to work or Managerial Psychology	e scene up to the KZ out on the effective d analyses of their is). KZ its ability to natura s of design and imp eeds and areas of on interesting proje nent in the Pharo C	presentation 5 a use of the r properties. 4 al abstraction blementation f interest. In ects and OO Consortium.
NI-LSM The subject is orio available information NI-MOP Object-oriented pro- is used to build com- of object systems addition to deepeni- technologies in ter NI-MPL NI-MSI	for audience. 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 these Modern Object-Oriented Programming in Pharo gramming 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 n ing object programming skills, which are generally applicable in other OO languages, students will also gain the opportunity to work of ms of semestral work with the possibility of cooperation with practice and related bachelor, diploma, postgraduate our direct involven	e scene up to the KZ put on the effective d analyses of their s). KZ its ability to natura s of design and imp eeds and areas of on interesting proje nent in the Pharo C ZK Z,ZK	presentation 5 use of the r properties. 4 abstraction bolementation f interest. In ects and OO Consortium. 2 4
NI-LSM The subject is orio available information NI-MOP Object-oriented pro- is used to build com- of object systems addition to deepeni- technologies in ter NI-MPL NI-MSI	for audience. 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 orgramming is currently one of the most widespread paradigms of software creation, especially enterprise information systems, where in 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 n ing object programming skills, which are generally applicable in other OO languages, students will also gain the opportunity to work or Managerial Psychology Mathematical Structures in Computer Science	e scene up to the KZ put on the effective d analyses of their s). KZ its ability to natura s of design and imp eeds and areas of on interesting proje nent in the Pharo C ZK Z,ZK	presentation 5 use of the r properties. 4 abstraction bolementation f interest. In ects and OO Consortium. 2 4
NI-LSM The subject is oria available information NI-MOP Object-oriented pro- is used to build com- of object systems addition to deepeni- technologies in ter NI-MPL NI-MSI Mathematical se	for audience. 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 orgramming is currently one of the most widespread paradigms of software creation, especially enterprise information systems, where in 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 n ing object programming skills, which are generally applicable in other OO languages, students will also gain the opportunity to work or Managerial Psychology Mathematical Structures in Computer Science emantics of programming languages. Data types as continous lattices, Scott topology. Procedures as continuous mappings. The Scot Introduction to category theory.	e scene up to the KZ put on the effective d analyses of their s). KZ its ability to natura s of design and imp eeds and areas of on interesting proje hent in the Pharo C ZK Z,ZK t model of lambda	presentation 5 use of the r properties. 4 abstraction belementation i interest. In ects and OO Consortium. 2 4 calculus.
NI-LSM The subject is oria available information NI-MOP Object-oriented pro- is used to build com- of object systems addition to deepeni- technologies in ter NI-MPL NI-MSI Mathematical sec NI-OLI	for audience. 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 orgramming is currently one of the most widespread paradigms of software creation, especially enterprise information systems, where in modern pure object system Pharo (https://pharo.org). The course focuses on individual approach to students, their development n 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 involven Managerial Psychology Mathematical Structures in Computer Science rmantics of programming languages. Data types as continous lattices, Scott topology. Procedures as continuous mappings. The Scot Introduction to category theory. Linux Drivers	e scene up to the KZ put on the effective d analyses of their s). KZ its ability to natura s of design and imp eeds and areas of on interesting proje nent in the Pharo C ZK Z,ZK t model of lambda	presentation 5 use of the r properties. 4 abstraction belementation interest. In ects and OO Consortium. 2 4 calculus.
NI-LSM The subject is oria available information NI-MOP Object-oriented pro- is used to build com- of object systems addition to deepeni- technologies in ter NI-MPL NI-MSI Mathematical sec NI-OLI The Linux operating	for audience. 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 orgramming is currently one of the most widespread paradigms of software creation, especially enterprise information systems, where in 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 n ing object programming skills, which are generally applicable in other OO languages, students will also gain the opportunity to work or Managerial Psychology Mathematical Structures in Computer Science remantics of programming languages. Data types as continous lattices, Scott topology. Procedures as continuous mappings. The Scott Introduction to category theory. Linux Drivers g system is an important operating system for personal computer and also for embedded systems. Systems on chip and combining po	e scene up to the KZ put on the effective d analyses of their s). KZ its ability to natura s of design and imp eeds and areas of on interesting proje nent in the Pharo C ZK Z,ZK t model of lambda werful processors	presentation 5 use of the r properties. 4 abstraction belementation i interest. In ects and OO Consortium. 2 4 calculus. 4 and FPGAs
NI-LSM The subject is oria available information NI-MOP Object-oriented pro- is used to build com- of object systems addition to deepeni- technologies in ter NI-MPL NI-MSI Mathematical sec NI-OLI The Linux operating increase the varia	for audience. 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 gramming is currently one of the most widespread paradigms of software creation, especially enterprise information systems, where the 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 n ing object programming skills, which are generally applicable in other OO languages, students will also gain the opportunity to work of ms of semestral work with the possibility of cooperation with practice and related bachelor, diploma, postgraduate our direct involven Managerial Psychology Mathematical Structures in Computer Science emantics of programming languages. Data types as continous lattices, Scott topology. Procedures as continuous mappings. The Scot Introduction to category theory. Linux Drivers g system is an important operating system for personal computer and also for embedded systems. Systems on chip and combining po ability of peripheral subsystems requiring specific software drivers. This course is an advanced course in the Linux driver development ability of peripheral subsystems requiring specific software drivers. This course is an advanced course in the Linux driver development ability of peripheral subsystems requiring specific software drivers. This course is an advanced course in the Linux driver development ability of peripheral subsystems requiring specific software drivers. This course is an advanced course in the Linux driver	e scene up to the KZ put on the effective d analyses of their s). KZ its ability to natura s of design and imp eeds and areas of on interesting proje nent in the Pharo C ZK Z,ZK t model of lambda Z,ZK swerful processors nt for master's stud	presentation 5 use of the r properties. 4 al abstraction oblementation i interest. In eects and OO Consortium. 2 4 calculus. 4 and FPGAs
NI-LSM The subject is oria available information NI-MOP Object-oriented pro- is used to build com- of object systems addition to deepeni- technologies in ter NI-MPL NI-MSI Mathematical se NI-OLI The Linux operating increase the vari- co	for audience. 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 gramming is currently one of the most widespread paradigms of software creation, especially enterprise information systems, where nplex 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 n ing object programming skills, which are generally applicable in other OO languages, students will also gain the opportunity to work of ms of semestral work with the possibility of cooperation with practice and related bachelor, diploma, postgraduate our direct involvem Managerial Psychology Mathematical Structures in Computer Science emantics of programming languages. Data types as continous lattices, Scott topology. Procedures as continuous mappings. The Scot Introduction to category theory. Linux Drivers g system is an important operating system for personal computer and also for embedded systems. Systems on chip and combining per ability of peripheral subsystems requiring specific software drivers. This course is an advanced course in the Linux driver development urse provides knowledge of Linux operating system architecture, principles of development of various types drivers, including practic	e scene up to the KZ but on the effective d analyses of their s). KZ its ability to natura s of design and imp eeds and areas of on interesting proje nent in the Pharo C ZK Z,ZK t model of lambda Z,ZK swerful processors nt for master's stud al experience.	presentation 5 use of the r properties. 4 abstraction polementation interest. In ects and OO Consortium. 2 4 calculus. 4 and FPGAs dents. The
NI-LSM The subject is oria available information NI-MOP Object-oriented pro- is used to build com- of object systems addition to deepeni- technologies in ter- NI-MPL NI-MSI Mathematical se NI-OLI The Linux operating increase the vari- con- NI-PDD	for audience. 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 gramming 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 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 involvem Managerial Psychology Mathematical Structures in Computer Science remantics of programming languages. Data types as continous lattices, Scott topology. Procedures as continuous mappings. The Scot Introduction to category theory. Linux Drivers g system is an important operating system for personal computer and also for embedded systems. Systems on chip and combining por ability of peripheral subsystems requiring specific software drivers. This course is an advanced course in the Linux driver development urse provides knowledge of Linux operating system architecture, principles of development of various types drivers, including practic Data Preprocessing	e scene up to the KZ but on the effective d analyses of their is). KZ its ability to natura s of design and imp eeds and areas of on interesting proje- nent in the Pharo C ZK Z,ZK t model of lambda Z,ZK werful processors of or master's stud al experience. Z,ZK	presentation 5 use of the r properties. 4 abstraction below colsentation f interest. In ects and OO Consortium. 2 4 calculus. 4 and FPGAs dents. The 5
NI-LSM The subject is oria available information NI-MOP Object-oriented pro- is used to build com- of object systems addition to deepeni- technologies in ter NI-MPL NI-MSI Mathematical se NI-OLI The Linux operating increase the vari- con- NI-PDD Students learn to p	for audience. 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 gramming 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 n ing object programming skills, which are generally applicable in other OO languages, students will also gain the opportunity to work of ms of semestral work with the possibility of cooperation with practice and related bachelor, diploma, postgraduate our direct involvem Managerial Psychology Mathematical Structures in Computer Science remantics of programming languages. Data types as continuous lattices, Scott topology. Procedures as continuous mappings. The Scot Introduction to category theory. Linux Drivers g system is an important operating system for personal computer and also for embedded systems. Systems on chip and combining po ability of peripheral subsystems requiring specific software drivers. This course is an advanced course in the Linux driver development urse provides knowledge of Linux operating system architecture, principles of development of various types drivers, including practic Data Preprocessing repare raw data for further processing and analysis. They learn what algorithms can be used to extract information from various data s	e scene up to the KZ but on the effective d analyses of their is). KZ its ability to natura s of design and imp eeds and areas of on interesting proje- nent in the Pharo C ZK Z,ZK t model of lambda Z,ZK swerful processors of or master's stud al experience. Z,ZK sources, such as in	presentation 5 use of the r properties. 4 abstraction polementation interest. In ects and OO Consortium. 2 4 calculus. 4 and FPGAs dents. The 5 nages, texts,
NI-LSM The subject is oria available information NI-MOP Object-oriented pro- is used to build com- of object systems addition to deepeni- technologies in ter NI-MPL NI-MSI Mathematical se NI-OLI The Linux operating increase the vari- con- NI-PDD Students learn to p	for audience. 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 gramming 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 n ing object programming skills, which are generally applicable in other OO languages, students will also gain the opportunity to work of Managerial Psychology Mathematical Structures in Computer Science mmantics of programming languages. Data types as continous lattices, Scott topology. Procedures as continuous mappings. The Scot Introduction to category theory. Linux Drivers g system is an important operating system for personal computer and also for embedded systems. Systems on chip and combining po ability of peripheral subsystems requiring system architecture, principles of development of various types drivers, including practic Data Preprocessing repare raw data for further processing and analysis. They learn what algorithms can be used to extract information from various data s and learn the skills to apply these theoretical concepts to solve specific problems in individual projects - e.g., extraction of characteris	e scene up to the KZ but on the effective d analyses of their is). KZ its ability to natura s of design and imp eeds and areas of on interesting proje- nent in the Pharo C ZK Z,ZK t model of lambda Z,ZK swerful processors of or master's stud al experience. Z,ZK sources, such as in	presentation 5 use of the r properties. 4 abstraction polementation interest. In ects and OO Consortium. 2 4 calculus. 4 and FPGAs dents. The 5 nages, texts,
NI-LSM The subject is oria available information NI-MOP Object-oriented pro- is used to build com- of object systems addition to deepeni- technologies in ter NI-MPL NI-MPL NI-MSI Mathematical se NI-OLI The Linux operating increase the vari- con- NI-PDD Students learn to pu- time series, etc., a	for audience. 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 gramming 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 n ing object programming skills, which are generally applicable in other OO languages, students will also gain the opportunity to work of Managerial Psychology Mathematical Structures in Computer Science emantics of programming languages. Data types as continous lattices, Scott topology. Procedures as continuous mappings. The Scot Introduction to category theory. Linux Drivers g system is an important operating system for personal computer and also for embedded systems. Systems on chip and combining pc ability of peripheral subsystems requiring specific software drivers. This course is an advanced course in the Linux driver development Data Preprocessing repare raw data for further processing and analysis. They learn what algorithms can be used to extract information from various data s and learn the skills to apply these theoretical concepts to solve specific problems in individual projects - e.g., extraction of characteris pages.	e scene up to the KZ but on the effective d analyses of their is). KZ its ability to natura s of design and imp eeds and areas of on interesting proje- nent in the Pharo C ZK Z,ZK t model of lambda Z,ZK swerful processors of commaster's stud al experience. Z,ZK sources, such as in tics from images c	presentation 5 use of the r properties. 4 abstraction below the rest. In ects and OO Consortium. 2 4 calculus. 4 and FPGAs dents. The 5 nages, texts, or from web
NI-LSM The subject is oria available information NI-MOP Object-oriented pro- is used to build com- of object systems addition to deepeni- technologies in ter NI-MPL NI-MSI Mathematical se NI-OLI The Linux operating increase the varia- con NI-PDD Students learn to p- time series, etc., a	for audience. 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 gramming is currently one of the most widespread paradigms of software creation, especially enterprise information systems, where the most widespread paradigms of software creation, especially enterprise information systems, where the 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 n 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 involvem Managerial Psychology Mathematical Structures in Computer Science mantics of programming languages. Data types as continous lattices, Scott topology. Procedures as continuous mappings. The Scot Introduction to category theory. Linux Drivers g system is an important operating system for personal computer and also for embedded systems. Systems on chip and combining pr ability of peripheral subsystems requiring specific software drivers. This course is an advanced course in the Linux driver development urse provides knowledge of Linux operating system architecture, principles of development of various types drivers, including practic Data Preprocessing repare raw data for further processing and analysis. They learn what algorithms can be used to extract information from various datas s and le	e scene up to the KZ but on the effective d analyses of their is). KZ its ability to natura s of design and imp eeds and areas of on interesting proje- tent in the Pharo C ZK Z,ZK t model of lambda Z,ZK t model of lambda Z,ZK swerful processors at experience. Z,ZK sources, such as in tics from images c	presentation 5 use of the r properties. 4 abstraction below the rest. In ects and OO Consortium. 2 4 calculus. and FPGAs dents. The 5 nages, texts, or from web 4
NI-LSM The subject is oria available information NI-MOP Object-oriented pro- is used to build com- of object systems addition to deepeni- technologies in ter NI-MPL NI-MSI Mathematical se NI-OLI The Linux operating increase the vari- con NI-PDD Students learn to p time series, etc., a NI-PSD The course will intr	for audience. 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 these Modern Object-Oriented Programming in Pharo gramming 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 n ing object programming skills, which are generally applicable in other OO languages, students will also gain the opportunity to work c Managerial Psychology Mathematical Structures in Computer Science emantics of programming languages. Data types as continous lattices, Scott topology. Procedures as continuous mappings. The Scot Introduction to category theory. Linux Drivers g system is an important operating system for personal computer and also for embedded systems. Systems on chip and combining po ability of peripheral subsystems requiring specific software drivers. This course is an advanced course in the Linux driver development Data Preprocessing repare raw data for further processing and analysis. They learn what algorithms can be used to extract information from various data s and learn the skills to apply these theoretical concepts to solve specific problems in individual projects - e.g., extraction of characteris pages. Public Services Design	e scene up to the KZ but on the effective d analyses of their is). KZ its ability to natura s of design and imp eeds and areas of on interesting proje- nent in the Pharo C ZK Z,ZK t model of lambda Z,ZK t model of lambda Z,ZK swerful processors at experience. Z,ZK sources, such as in tics from images c KZ rocess from the period	presentation 5 use of the r properties. 4 abstraction below the rest. In ects and OO Consortium. 2 4 calculus. 4 and FPGAs dents. The 5 nages, texts, or from web 4 erspective of
NI-LSM The subject is oria available information NI-MOP Object-oriented pro- is used to build com- of object systems addition to deepeni- technologies in ter NI-MPL NI-MSI Mathematical se NI-OLI The Linux operating increase the vari- con NI-PDD Students learn to p time series, etc., a NI-PSD The course will intr	for audience. 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 gramming 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 n 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 involvem Managerial Psychology Mathematical Structures in Computer Science emantics of programming languages. Data types as continous lattices, Scott topology. Procedures as continuous mappings. The Scot Introduction to category theory. Linux Drivers g system is an important operating system for personal computer and also for embedded systems. Systems on chip and combining pc ability of peripheral subsystems requiring specific software drivers. This course is an advanced course in the Linux driver development use provides knowledge of Linux operating system architecture, principles of development of various types drivers, including practic Data Preprocessing repare raw data for further processing and analysis. They learn what algorithms can be used to extract information from various data s and learn the skills to apply these theoretical concepts to solve specific problems in individual projects	e scene up to the KZ but on the effective d analyses of their is). KZ its ability to natura s of design and imp eeds and areas of on interesting proje- nent in the Pharo C ZK Z,ZK t model of lambda Z,ZK t model of lambda Z,ZK swerful processors at experience. Z,ZK sources, such as in tics from images c KZ rocess from the period	presentation 5 use of the r properties. 4 abstraction below the rest. In ects and OO Consortium. 2 4 calculus. 4 and FPGAs dents. The 5 nages, texts, or from web 4 erspective of
NI-LSM The subject is oria available information NI-MOP Object-oriented pro- is used to build com- of object systems addition to deepeni- technologies in ter NI-MPL NI-MSI Mathematical se NI-OLI The Linux operating increase the vari- con NI-PDD Students learn to p time series, etc., a NI-PSD The course will intri suppliers (devs a	for audience. 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 gramming is currently one of the most widespread paradigms of software creation, especially enterprise information systems, where inplex 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 n ing object programming skills, which are generally applicable in other OO languages, students will also gain the opportunity to work d ms of semestral work with the possibility of cooperation with practice and related bachelor, diploma, postgraduate our direct involven Managerial Psychology Mathematical Structures in Computer Science mantics of programming languages. Data types as continuous tatices, Scott topology. Procedures as continuous mappings. The Scot Introduction to category theory. Linux Drivers g system is an important operating system for personal computer and also for embedded systems. Systems on chip and combining po ability of peripheral subsystems requiring specific software drivers. This course is an advanced course in the Linux driver development pages. Public Services Design oduce students to specifics of UX, Service design and analysis. They learn what algorithms can be used to extract information from various data s ind learn the skills to apply these theoretical concepts to solve specific problems in individual projects - e.g., extraction of characteris pages. Public Services Design oduce students to specifics of UX, Service desig	e scene up to the KZ but on the effective d analyses of their is). KZ its ability to natura s of design and imp eeds and areas of on interesting proje- nent in the Pharo C ZK Z,ZK t model of lambda Z,ZK t model of lambda Z,ZK overful processors of commaster's stud al experience. Z,ZK sources, such as in tics from images c KZ rocess from the per	presentation 5 use of the r properties. 4 abstraction below the rest. In ects and OO Consortium. 2 4 calculus. 4 and FPGAs dents. The 5 nages, texts, or from web 4 erspective of sentatives.
NI-LSM The subject is oria available information NI-MOP Object-oriented pro- is used to build com- of object systems addition to deepeni- technologies in ter NI-MPL NI-MSI Mathematical se NI-OLI The Linux operating increase the varia- con NI-PDD Students learn to p- time series, etc., a NI-PSD The course will intri- suppliers (devs a NI-PSL	for audience. 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 gramming 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 n ing object programming skills, which are generally applicable in other OO languages, students will also gain the opportunity to work d ms of semestral work with the possibility of cooperation with practice and related bachelor, diploma, postgraduate our direct involven Managerial Psychology Mathematical Structures in Computer Science mmantics of programming languages. Data types as continuous lattices, Scott topology. Procedures as continuous mappings. The Scot Introduction to category theory. Linux Drivers g system is an important operating system for personal computer and also for embedded systems. Systems on chip and combining pc ability of peripheral subsystems requiring specific software drivers. This course is an advanced course in the Linux driver development urse provides knowledge of Linux operating system architecture, principles of development of various types drivers, including practic Data Preprocessing repare raw data for further processing and analysis. They learn what algorithms can be used to extract information from various data as nal learn the skills to apply these theoretical concepts to solve specific problems in individual project	e scene up to the KZ but on the effective d analyses of their is). KZ its ability to natura s of design and imp eeds and areas of on interesting proje- nent in the Pharo C ZK Z,ZK t model of lambda Z,ZK owerful processors at experience. Z,ZK sources, such as in tics from images c KZ rocess from the pe n with client repres	presentation 5 use of the r properties. 4 abstraction below the rest. In ects and OO Consortium. 2 4 calculus. 4 and FPGAs dents. The 5 nages, texts, or from web 4 erspective of sentatives. 4
NI-LSM The subject is oria available information NI-MOP Object-oriented pro- is used to build com- of object systems addition to deepeni- technologies in ter NI-MPL NI-MSI Mathematical se NI-OLI The Linux operating increase the varia- con NI-PDD Students learn to p time series, etc., a NI-PSD The course will intri- suppliers (devs a NI-PSL The course introduction	for audience. 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 gramming 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 n ing object programming skills, which are generally applicable in other OO languages, students will also gain the opportunity to work o ms of semestral work with the possibility of cooperation with practice and related bachelor, diploma, postgraduate our direct involvem Managerial Psychology Mathematical Structures in Computer Science mmantics of programming languages. Data types as continous lattices, Scott topology. Procedures as continuous mappings. The Scot Introduction to category theory. Linux Drivers g system is an important operating system for personal computer and als for embedded systems. Systems on chip and combining pc ability of peripheral subsystems requiring specific software drivers. This course is an advanced course in the Linux driver development use provides knowledge of Linux operating system and heterute, principles of development of various types drivers, including practic Data Preprocessing repare raw data for further processing and analysis. They learn what algorithms can be used to extract information from various data s und learn the skills to apply these theoretical concepts to solve specific problems in individual projects -	e scene up to the KZ but on the effective d analyses of their is). KZ its ability to natura s of design and imp eeds and areas of on interesting proje- tent in the Pharo C ZK Z,ZK t model of lambda Z,ZK t model of lambda Z,ZK sources, such as in tics from images c KZ rocess from the pe n with client represe Z,ZK es - e.g.pattern mages	presentation 5 use of the properties. 4 abstraction below clease and OO Consortium. 2 4 calculus. 4 calculus. 5 nages, texts, or from web 4 erspective of sentatives. 4 atching and
NI-LSM The subject is oria available information NI-MOP Object-oriented pro- is used to build com- of object systems addition to deepeni- technologies in ter NI-MPL NI-MSI Mathematical se NI-OLI The Linux operating increase the varia- con NI-PDD Students learn to p time series, etc., a NI-PSD The course will intri- suppliers (devs a NI-PSL The course introduction	for audience. 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 gramming 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 n ing object programming skills, which are generally applicable in other OO languages, students will also gain the opportunity to work o ms of semestral work with the possibility of cooperation with practice and related bachelor, diploma, postgraduate our direct involven Managerial Psychology Mathematical Structures in Computer Science mantics of programming languages. Data types as continous lattices, Scott topology. Procedures as continuous mappings. The Scot Introduction to category theory. Linux Drivers g system is an important operating system for personal computer and also for embedded systems. Systems on chip and combining pc ability of peripheral subsystems requiring specific software drivers. This course is an advanced course in the Linux driver development repare raw data for further processing and analysis. They learn what algorithms can be used to extract information from various data s and learn the skills to apply these theoretical concepts to solve specific problems in individual projects - e.g., extraction of characteris	e scene up to the KZ but on the effective d analyses of their is). KZ its ability to natura s of design and imp eeds and areas of on interesting proje- tent in the Pharo C ZK Z,ZK t model of lambda Z,ZK t model of lambda Z,ZK sources, such as in tics from images c KZ rocess from the pe n with client represe Z,ZK es - e.g.pattern mages	presentation 5 use of the properties. 4 abstraction below the properties. 1 abstraction below the properties. 1 abstraction below the properties. 2 4 calculus. 2 4 calculus. 4 and FPGAs dents. The 5 nages, texts, or from web 4 erspective of sentatives. 4 atching and
NI-LSM The subject is oria available information NI-MOP Object-oriented pro- is used to build com- of object systems addition to deepeni- technologies in ter NI-MPL NI-MSI Mathematical se NI-OLI The Linux operating increase the varia- con NI-PDD Students learn to p time series, etc., a NI-PSD The course will intri- suppliers (devs a NI-PSL The course introduced advance standard litered	for audience. 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 gramming 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 n ing object programming skills, which are generally applicable in other OO languages, students will also gain the opportunity to work o Managerial Psychology Mathematical Structures in Computer Science mantics of programming languages. Data types as continous lattices, Scott topology. Procedures as continuous mappings. The Scot Introduction to category theory. Linux Drivers g system is an important operating system for personal computer and also for embedded systems. Systems on chip and combining pc ability of peripheral subsystems requiring specific software drivers. This course is an advanced course in the Linux driver developmen urse provides knowledge of Linux operating system architecture, principles of development of various types drivers, including practic Data Preprocessing epages. Public Services Design oduce students to specifics of UX, Service design and development pr padies students will vort on categing reages. Public Services Design urd designesr) as well as clients. In small teams students will wrok no projects from partner organizations and will try out collaboratio Course is aimed at students-designers as well as clients. Programming in	e scene up to the KZ sut on the effective d analyses of their is). KZ its ability to natura s of design and imp eeds and areas of on interesting proje- nent in the Pharo C ZK Z,ZK t model of lambda Z,ZK swerful processors at experience. Z,ZK sources, such as in tics from images c KZ rocess from the per n with client represent LZ,ZK es - e.g.pattern mag d libraries e.g. Play,	presentation 5 use of the properties. 4 abstraction below the properties. 1 abstraction below the properties. 1 abstraction below the properties. 2 4 calculus. 2 4 calculus. 4 and FPGAs dents. The 5 nages, texts, pr rom web 4 erspective of sentatives. 4 atching and , Cassandra, the properties.
NI-LSM The subject is oria available information NI-MOP Object-oriented pro- is used to build com- of object systems addition to deepeni- technologies in ter NI-MPL NI-MSI Mathematical se NI-OLI The Linux operating increase the varia- con NI-PDD Students learn to p time series, etc., a NI-PSD The course will intri- suppliers (devs a NI-PSL The course introdu- advance standard lite NI-REV	for audience. Statistical Modelling Lab anted on a single and multi-target tracking. The student both learns the existing methods and tries to implement them. The stress is g 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 gramming 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 n 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 involvem Managerial Psychology Mathematical Structures in Computer Science mantics of programming languages. Data types as continous lattices, Scott topology. Procedures as continuous mappings. The Scot Introduction to category theory. Linux Drivers g system is an important operating system for personal computer and also for embedded systems. Systems on chip and combining pc ability of peripheral subsystems requiring specific software drivers. This course is an advanced course in the Linux driver development pages. Public Services Design duce students to specifics of UX, Service design and development for publics sector. We will look into the design and development p nd designesr) as well as clients. In small teams students will work on projects from parateging and will try out collaboratio Course is aimed at students-designers as well as clients. Programming in Scala uses the modern programm	e scene up to the KZ but on the effective d analyses of their is). KZ its ability to natura s of design and imp eeds and areas of on interesting proje- nent in the Pharo C ZK Z,ZK t model of lambda Z,ZK t model of lambda Z,ZK owerful processors at experience. Z,ZK sources, such as in tics from images of KZ rocess from the pen n with client represe Z,ZK es - e.g.pattern ma d libraries e.g. Play,	presentation 5 use of the properties. 4 abstraction bementation interest. In ects and OO Consortium. 2 4 calculus. 4 calculus. 5 nages, texts, or from web 4 erspective of sentatives. 4 casandra, 5
NI-LSM The subject is oria available information NI-MOP Object-oriented pro- is used to build com- of object systems addition to deepeni- technologies in ter NI-MPL NI-MSI Mathematical se NI-OLI The Linux operating increase the varia- con NI-PDD Students learn to p time series, etc., a NI-PSD The course will intri- suppliers (devs a NI-PSL The course introdu- advance standard lite NI-REV Students will get ac	for audience. 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 a n and its modeling using numpy and scipy. The second half of the semester is tocused 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 gramming is currently one of the most widespread paradigms of software creation, especially enterprise information systems, where uplex 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 n ing object programming skills, which are generally applicable in other OO languages, students will also gain the opportunity to work or sof semestral work with the possibility of cooperation with practice and related bachelor, diploma, postgraduate our direct involveme Managerial Psychology Mathematical Structures in Computer Science mantics of programming languages. Data types as continuous lattices, Scott topology. Procedures as continuous mappings. The Scot Introduction to category theory. Linux Drivers g system is an important operating system for personal computer and also for embedded systems. Systems on chip and combining pc ability of peripheral subsystems requiring specific software drivers. This course is an advanced course in the Linux driver development use provides knowledge of Linux operating system architecture, principles of development of various types drivers, including practic Data Preprocessing repare raw data for further processing and analysis. They learn what algorithms can be used to extract information from various data es ind learn the skills to apply these theoretical concepts to solve specific problems in individual projects	e scene up to the KZ but on the effective d analyses of their is). KZ its ability to natura s of design and imp eeds and areas of on interesting proje nent in the Pharo C ZK Z,ZK t model of lambda Z,ZK owerful processors al experience. Z,ZK ources, such as in tics from images of KZ rocess from the pe n with client represe LZ,ZK or e and after the m	presentation 5 use of the properties. 4 abstraction below cleant interest. In ects and OO Consortium. 2 4 calculus. 4 calculus. 4 s and FPGAs dents. The 5 nages, texts, or rform web 4 erspective of sentatives. 4 cassandra, 5 nain function
NI-LSM The subject is oria available information NI-MOP Object-oriented pro- is used to build com- of object systems addition to deepeni- technologies in ter NI-MPL NI-MSI Mathematical se NI-OLI The Linux operating increase the varia- con NI-PDD Students learn to p- time series, etc., a NI-PSD The course will intri- suppliers (devs a NI-PSL The course introdu- advance standard lite NI-REV Students will get ac- is called. Students	for audience. Statistical Modelling Lab anted on a single and multi-target tracking. The student both learns the existing methods and tries to implement them. The stress is g 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 gramming 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 n 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 involvem Managerial Psychology Mathematical Structures in Computer Science mantics of programming languages. Data types as continous lattices, Scott topology. Procedures as continuous mappings. The Scot Introduction to category theory. Linux Drivers g system is an important operating system for personal computer and also for embedded systems. Systems on chip and combining pc ability of peripheral subsystems requiring specific software drivers. This course is an advanced course in the Linux driver development pages. Public Services Design duce students to specifics of UX, Service design and development for publics sector. We will look into the design and development p nd designesr) as well as clients. In small teams students will work on projects from parateging and will try out collaboratio Course is aimed at students-designers as well as clients. Programming in Scala uses the modern programm	e scene up to the KZ but on the effective d analyses of their is). KZ its ability to natural s of design and imp eeds and areas of on interesting proje nent in the Pharo C ZK Z,ZK t model of lambda Z,ZK sources, such as in tics from images c KZ rocess from the pe n with client represe LZ,ZK or e and after the m ated to reverse eng	presentation 5 use of the properties. 4 abstraction below the properties. 1 abstraction below the properties. 1 abstraction below the properties. 2 4 calculus. 2 4 calculus. 4 and FPGAs dents. The 5 nages, texts, or from web 4 erspective of sentatives. 4 cassandra, 5 nain function gineering of

	the course is on the seminars, where students will solve practically oriented tasks from the real world.		
NI-SYP	Parsing and Compilers	Z,ZK	5
The module builds upo	on the knowledge of fundamentals of automata theory, formal language and formal translation theories. Students gain knowledge of va	arious variants and	applications
	of LR parsing and are introduced to special applications of parsers, such as incremental and parallel parsing.		
NI-TSP	Testing and Reliability	Z,ZK	5
Students will gain kno	owledge 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	h the help of
the intuitive path sens	sitization and to use an ATPG for automatic test generation. They will be able to design easily testable circuits and systems with bu	iilt-in-self-test equi	pment. 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 gain k	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 virtus			
	alization principles, tools and technologies that serve to facilitate and automate configuration, testing and monitoring, and to efficie	ently operate and o	optimize the
	alization principles, tools and technologies that serve to facilitate and automate configuration, testing and monitoring, and to efficie meters of modern computer systems. Theoretically and practically, they will get acquainted with containerization as the most effect		•
performance paran		ive technology tod	ay for the
performance paran	meters of modern computer systems. Theoretically and practically, they will get acquainted with containerization as the most effect	ive technology tod	ay for the
performance paran	meters of modern computer systems. Theoretically and practically, they will get acquainted with containerization as the most effect olex computer systems and with specific technologies of cloud systems. Finally, they will learn the principles and gain practical skills in	ive technology tod	ay for the
performance paran management of compl	meters of modern computer systems. Theoretically and practically, they will get acquainted with containerization as the most effect olex computer systems and with specific technologies of cloud systems. Finally, they will learn the principles and gain practical skills in and development tools (Continuous integration and development).	ive technology tod n the use of moder	ay for the n integration
performance paran management of compl	meters of modern computer systems. Theoretically and practically, they will get acquainted with containerization as the most effect olex computer systems and with specific technologies of cloud systems. Finally, they will learn the principles and gain practical skills in and development tools (Continuous integration and development). Computability	ive technology tod n the use of moder	ay for the n integration
performance paran management of compl NI-VYC	meters of modern computer systems. Theoretically and practically, they will get acquainted with containerization as the most effect olex computer systems and with specific technologies of cloud systems. Finally, they will learn the principles and gain practical skills in and development tools (Continuous integration and development). Computability Classical theory of recursive functions and effective computability.	ive technology tod n the use of moder	ay for the n integration
performance paran management of compl NI-VYC TV1	meters of modern computer systems. Theoretically and practically, they will get acquainted with containerization as the most effect olex computer systems and with specific technologies of cloud systems. Finally, they will learn the principles and gain practical skills in and development tools (Continuous integration and development). Computability Classical theory of recursive functions and effective computability. Physical Education	ive technology tod n the use of moder Z,ZK Z	ay for the n integration
performance paran management of compl NI-VYC TV1 TV2	meters of modern computer systems. Theoretically and practically, they will get acquainted with containerization as the most effect olex computer systems and with specific technologies of cloud systems. Finally, they will learn the principles and gain practical skills in and development tools (Continuous integration and development). Computability Classical theory of recursive functions and effective computability. Physical Education Physical Education	ive technology tod n the use of moder Z,ZK Z Z	ay for the n integration 4 0 0
performance paran management of compl NI-VYC TV1 TV2 TV2K1	meters of modern computer systems. Theoretically and practically, they will get acquainted with containerization as the most effect olex computer systems and with specific technologies of cloud systems. Finally, they will learn the principles and gain practical skills in and development tools (Continuous integration and development). Computability Classical theory of recursive functions and effective computability. Physical Education Physical Education Physical Education 2	ive technology tod n the use of moder Z,ZK Z Z Z	y for the n integration 4 0 0 1
performance paran management of compl NI-VYC TV1 TV2 TV2K1 TVK1	meters of modern computer systems. Theoretically and practically, they will get acquainted with containerization as the most effect olex computer systems and with specific technologies of cloud systems. Finally, they will learn the principles and gain practical skills in and development tools (Continuous integration and development). Computability Classical theory of recursive functions and effective computability. Physical Education Physical Education Physical Education 2 Physical Education	ive technology tod n the use of moder Z,ZK Z Z Z Z Z	y for the n integration 4 0 0 1 1
performance paran management of compl NI-VYC TV1 TV2 TV2K1 TVK1 TVKLV	meters of modern computer systems. Theoretically and practically, they will get acquainted with containerization as the most effect blex computer systems and with specific technologies of cloud systems. Finally, they will learn the principles and gain practical skills in and development tools (Continuous integration and development). Computability Classical theory of recursive functions and effective computability. Physical Education Physical Education Physical Education 2 Physical Education Physical Education	ive technology tod n the use of moder Z,ZK Z Z Z Z Z Z	ay for the n integration 4 0 0 1 1 1 0

For updated information see <u>http://bilakniha.cvut.cz/en/FF.html</u> Generated: day 2025-08-09, time 09:59.