Study plan

Name of study plan: Open Informatics - Computer Games and Graphics 2018

Faculty/Institute/Others: Faculty of Electrical Engineering Department: Branch of study guaranteed by the department: Welcome page Garantor of the study branch: Program of study: Open Informatics Type of study: Bachelor full-time Required credits: 152 Elective courses credits: 28 Sum of credits in the plan: 180 Note on the plan:

Name of the block: Compulsory courses in the program Minimal number of credits of the block: 122 The role of the block: P

Code of the group: 2018_BOIBAP Name of the group: Bachelor Project Requirement credits in the group: In this group you have to gain 20 credits Requirement courses in the group: In this group you have to complete 1 course Credits in the group: 20 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
BBAP20	Bachelor thesis Roman mejla Roman mejla (Gar.)	Z	20	12S	L,Z	Р

Ζ

20

Characteristics of the courses of this group of Study Plan: Code=2018_BOIBAP Name=Bachelor Project

BBAP20 Bachelor thesis

Code of the group: 2018_BOIBBE

Name of the group: Safety of the bachelor's studies

Requirement credits in the group:

Requirement courses in the group: In this group you have to complete at least 2 courses 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
BEZB	Safety in Electrical Engineering for a bachelor's degree Ivana Nová, Radek Havlí ek, Vladimír K la Radek Havlí ek Vladimír K la (Gar.)	Z	0	2BP+2BC	Z,L	Ρ
BEZZ	Basic health and occupational safety regulations Ivana Nová, Radek Havlí ek, Vladimír K la Radek Havlí ek Vladimír K la (Gar.)	Z	0	2BP+2BC	Z	Ρ

Characteristics of the courses of this group of Study Plan: Code=2018_BOIBBE Name=Safety of the bachelor's studies

BEZB	Safety in Electrical Engineering for a bachelor's degree	Z	0
The purpose of the safe	ty course is to give the students basic knowledge of electrical equipment and installation as to avoid danger arising from operative	ation of it. This inti	oductory course
contains fundamentals	of Safety Electrical Engineering. In this way the students receive qualification of instructed person that enables them to work	on electrical equi	oment.
BEZZ	Basic health and occupational safety regulations	Z	0
The guidelines were wo	rked out based on The Training Scheme for Health and Occupational Safety designed for employees and students of the Cze	ch Technical Univ	ersity in Prague,
which was provided by t	he Rector's Office of the CTU. Safety is considered one of the basic duties of all employees and students. The knowledge of	Health and Occu	pational Safety
regulations forms an inte	egral and permanent part of qualification requirements. This program is obligatory.		

Code of the group: 2018_BOIP

Name of the group: Compulsory subjects of the programme Requirement credits in the group: In this group you have to gain 102 credits

Requirement courses in the group: In this group you have to complete 17 courses

Credits in the group: 102

Note on the group:

Note on the grou		1		r	,	
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
B4B33ALG	Algorithms Marko Genyk-Berezovskyj, Daniel Pr ša Marko Genyk-Berezovskyj Marko Genyk-Berezovskyj (Gar.)	Z,ZK	6	2P+2C	Z	Ρ
B0B35APO	Computer Architectures Pavel Píša, Richard Šusta, Petr Št pán Pavel Píša Pavel Píša (Gar.)	Z,ZK	5	2P+2L	L	Р
B0B36DBS	Database Systems Martin imná Martin imná Martin imná (Gar.)	Z,ZK	6	2P+2C+4D	L	Р
B4B01DMA	Discrete Mathematics Petr Habala Petr Habala Petr Habala (Gar.)	Z,ZK	5	2P+2S	Z	Р
B0B01LAG	Linear Algebra Ji í Velebil, Natalie Žukovec, Daniel Gromada, Josef Dvo ák, Mat j Dostál Ji í Velebil Ji í Velebil (Gar.)	Z,ZK	8	4P+2S	z	Ρ
B0B01LGR	Logic anad Graphs Natalie Žukovec, Mat j Dostál, Alena Gollová Alena Gollová Marie Demlová (Gar.)	Z,ZK	5	3P+2S	Z,L	Ρ
B0B01MA1	Mathematical Analysis 1 Josef Dvo ák, Martin K epela, Josef Tkadlec, Veronika Sobotíková Josef Tkadlec Josef Tkadlec (Gar.)	Z,ZK	7	4P+2S	Z,L	Ρ
B0B01MA2	Mathematical Analysis 2 Karel Pospíšil, Miroslav Korbelá, Petr Hájek, Martin Bohata, Jaroslav Tišer, Paola Vivi, Hana Tur inová Petr Hájek Jaroslav Tišer (Gar.)	Z,ZK	7	4P+2S	L,Z	Ρ
B4B35OSY	Operating Systems Petr Št pán, Michal Sojka Michal Sojka Michal Sojka (Gar.)	Z,ZK	4	2P+2C	Z	Р
B0B33OPT	Optimization Tomáš Werner, Petr Olšák, Mirko Navara, Tomáš Kroupa Tomáš Werner Tomáš Werner (Gar.)	Z,ZK	7	4P+2C	Z,L	Ρ
B4B36PDV	Parallel and Distributed Computing Jakub Mare ek, Michal Jakob, Daria Mikhaylovskaya Michal Jakob Michal Jakob (Gar.)	Z,ZK	6	2P+2C	L	Ρ
B4B38PSIA	Computer Networks Ji í Novák, Jan Holub Ji í Novák Ji í Novák (Gar.)	Z,ZK	5	2P+2L	L	Р
B0B01PST	Probability and Statistics Miroslav Korbelá, Veronika Sobotíková, Kate ina Helisová, Matvei Slavenko Kate ina Helisová Petr Hájek (Gar.)	Z,ZK	7	4P+2S	z	Ρ
B0B36PRP	Procedural Programming Jan Faigl Jan Faigl (Gar.)	Z,ZK	6	2P+2C	Z	Р
B0B36PJV	Programming in Java Ji í Vok ínek, Martin Mudroch, Ladislav Serédi Ji í Vok ínek Ji í Vok ínek (Gar.)	Z,ZK	6	2P+3C+7D	L	Ρ
B4B33RPH	Solving Problems and other Games Tomáš Svoboda, Petr Pošík Petr Pošík Tomáš Svoboda (Gar.)	КZ	6	2P+3C	Z	Р
B4BPROJ6	Unassisted project Tomáš Svoboda, Petr Pošík, Ji í Šebek, Jaroslav Sloup, Ivan Jelínek, Katarína Žmolíková Petr Pošík	Z	6	0+2	Z,L	Ρ
1	e courses of this group of Study Plan: Code=2018_BOIP Name=	=Compulsory	v subject			
	gorithms s development is constructed with minimum dependency to programming language; ne	vertheless the lea	tures and s		Z,ZK based on Java	6 a. Basic da
	sic algorithms, recursive functions, abstract data types, stack, queues, trees, searching,					
	and construct non-trivial algorithms and to evaluate their effectivity.			<u> </u>		
	omputer Architectures				Z,ZK	5
	atabase Systems a basic database course mainly aimed at the student ability to design a relational data r	model and to use	the SOL lar		Z,ZK	6 is well as f
data querying and to choose	e the appropriate degree of transaction isolation. Students will also get acquainted with gement. They will verify their knowledge during the elaboration of a continuously submi	the most commo	only used inc			
In this course students meet	screte Mathematics t some important topics from the field of discrete mathematics. Namely, they will explore ality of sets, induction, and recurrence equations. The second aim of this course is to te	-		nodulo n, dia		
	to mathematics as science.				,	,
1	near Algebra parts of linear algebra. Firstly, the basic notions of a linear space and linear mappings are	e covered (linear c	lependence	1	Z,ZK ndence, basis,	8 coordinate
		,				

B0B01LGR	Logic anad Graphs	Z,ZK	5
	cs of mathematical logic and graph theory. Syntax and semantics of propositional and predicate logic are introduced. The import	ance of the notion	of consequence
and of the relationship I	between a formula and its model is stressed. Further, basic notions from graph theory are introduced.		
B0B01MA1	Mathematical Analysis 1	Z,ZK	7
The aim of the course is	s to introduce students to basics of differential and integral calculus of functions of one variable.		
B0B01MA2	Mathematical Analysis 2	Z,ZK	7
The subject covers an i	ntroduction to the differential and integral calculus in several variables and basic relations between curve and surface integral	ls. Other part cont	ains function
series and power series	s with application to Taylor and Fourier series.		
B4B35OSY	Operating Systems	Z,ZK	4
	ration system's basic concepts and principles as processes, threads, communication and synchronization, virtual memory, dr		
	re theoretically described and demonstrated on Linux and Windows OS with multi-core systems. Practical exercises from OS	in C programmin	g language will
be solved on labs. Stud	ents will work with Linux OS and micro-kernel NOVA.		
B0B33OPT	Optimization	Z,ZK	7
	introduction to mathematical optimization, specifically to optimization in real vector spaces of finite dimension. The theory is illus	strated with a num	ber of examples.
You will refresh and ext	end many topics that you know from linear algebra and calculus courses.		
B4B36PDV	Parallel and Distributed Computing	Z,ZK	6
B4B38PSIA	Computer Networks	Z,ZK	5
B0B01PST	Probability and Statistics	Z,ZK	7
B0B36PRP	Procedural Programming	Z,ZK	6
The course accompanie	s basic programming emphasizing the data representation in computer memory. Furthermore, the concepts of linked data stru	ictures and proces	ssing user inputs
are developed. Student	s master the practical implementation of simple individual tasks. The course emphasizes acquiring programming habits for cr	eating readable a	nd reusable
programs. At the same t	ime, the effort is to build students an overview of the program operation, data model, memory access, and management. There	fore, the C program	mming language
is used that provides a c	direct link between the program data structures and their representation in the computer memory. Students will get acquainted	not only with prog	ram compilation
and linking but also with	e debugging and profiling. Labs aim to acquire practical skills of implementing simple individual tasks, emphasizing functionality	y and accuracy of	implementation.
Student independence	is developed by a set of homework with the possibility of optional and bonus assignments. The final task is an integration of a	larger program u	sing existing
· ·	ation of coding style motivated by writing legible, understandable, and maintainable codes is also a part of the selected tasks		
B0B36PJV	Programming in Java	Z,ZK	6
	e basics of algorithms and programming from the first semester and introduces students to the Java environment. The course		
	he topics of the course includes exceptions, event handling, and building a graphical interface. Basic library methods, working		
	nportant topic is models of multithreaded applications and their implementation. Practical exercises of practical skills and know	•	
	and semester work, which will be submitted continuously through the source code version control system. The semester work	c scoring consists	of points for the
	ncy of the code, as well as points that take into account the quality of the source codes, their readability and reusability.		
B4B33RPH	Solving Problems and other Games	KZ	6
	to let students to deal with real-world problems properly. When working on real problems the student shall learn how to decor		
	o test and validate individual steps and so on. Many problems will actually be beyond the first-year-student skills. And many p		
	red parts should motivate the students to study difficult theoretical subjects. They should generate the important questions. Id		
	ager to study deeper about informatics. The course also explains the basis of the object oriented design, software testing, wa	ays for writing read	able and robust
codes.		7	0
B4BPROJ6	Unassisted project	Z	6

Code of the group: 2015_BZAJ

Name of the group: Exam from the english language

Requirement credits in the group:

Requirement courses in the group: In this group you have to complete 2 courses 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
B0B04B1K	English language B1 - classified assessment Markéta Havlí ková, Pavla Péterová, Erik Peter Stadnik, Michael Ynsua, Dana Saláková, Petra Juna Jennings Petra Juna Jennings Petra Juna Jennings (Gar.)	κz	0	0C	Z,L	Ρ
B0B04B2Z	English language B2 - exam Michael Ynsua, Dana Saláková, Petra Juna Jennings Petra Juna Jennings Petra Juna Jennings (Gar.)	Z,ZK	0	0C	Z,L	Р

Characteristics of the courses of this group of Study Plan: Code=2015_BZAJ Name=Exam from the english language

B0B04B1K	English language B1 - classified assessment	KZ	0
verifying of the student	s skills of B1 level		
B0B04B2Z	English language B2 - exam	Z,ZK	0
I) The B2 English Exam	is a compulsory subject for all Faculty of Electrical Engineering students at the Czech Technical University. According to the	Study and Examin	nation Rules and
Regulations for Student	s at CTU (Part III, Article 4), a compulsory subject is one "whose completion is a necessary condition in order to successfully	complete the stu	dy programme."
In addition, this requires	the "passing of an examination evaluated on the scale A, B, C, D, or E" (SERR Part III, Article 6). II) According to the Com	imon European F	ramework of
Reference for Language	es (CEFR), an international standard for describing language ability, the definition of an English language learner who has ach	ieved the B2 (Upp	er-Intermediate)
level is one who "can	understand the main ideas of complex text on both concrete and abstract topics, including technical discussions in his/her fie	eld of specialisation	on. Can interact
with a degree of fluency	and spontaneity that makes regular interaction with native speakers quite possible without strain for either party. Can product	ce clear, detailed	ext on a wide
range of subjects and e	xplain a viewpoint on a topical issue giving the advantages and disadvantages of various options." III) Students who have suc	ccessfully passed	an approved
international exam withi	n the past five years may present their certificate to the Department of Languages, Faculty of Electrical Engineering.Upon ap	proval, students	are then exempt
from both the Written Te	est and the Oral Part. For a list of approved international exams go the department website: http://jazyky.fel.cvut.cz/		

Code of the group: 2018_BOIPS4

Name of the group: Compulsory subjects of the branch

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 5 courses

Credits in the group: 30

Note on the group:

Specializace - počítačové hry a grafika

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
B4B39IUR	User interfaces implementation Zden k Míkovec, Miroslav Macík Miroslav Macík Zden k Míkovec (Gar.)	Z,ZK	6	2P+2S	Z	PZ
B4B39HRY	Computer Games Ji í Bittner, David Sedlá ek David Sedlá ek Ji í Bittner (Gar.)	Z,ZK	6	2P+2C	Z	ΡZ
B0B39PGR	Computer graphics programming Jaroslav Sloup, Petr Felkel Jaroslav Sloup Petr Felkel (Gar.)	Z,ZK	6	2P+2C+8D	L	ΡZ
BE4B39VGO	Creating graphic content Ladislav molík Ladislav molík (Gar.)	Z,ZK	6	2P+2C+8D	Z	ΡZ
B4B36ZUI	Introduction to Artificial Intelligence Viliam Lisý, Branislav Bošanský Branislav Bošanský Michal P chou ek (Gar.)	Z,ZK	6	2P+2C	L	PZ

Characteristics of the courses of this group of Study Plan: Code=2018_BOIPS4 Name=Compulsory subjects of the branch

 B4B39IUR
 User interfaces implementation
 Z,ZK
 6

 Based on the user interface specification (created by design team), the student will be able to implement user interface and communicate efficiently with other stakeholders taking part in the whole process of design, testing, and implementation of the user interface.
 B4B39HRY
 Computer Games
 Z,ZK
 6

 Students familiarize themselves with the issues encountered during programming computer games. They learn topics such as 3D model representation, animations, collision detection, animatis animatis animations, collision detection, animations,

physical simulation, and	real-time rendering in the context of computer games development. During exercises they will develop a computer game in the	eams: from the ga	me concept and
design document, throu	gh programming game mechanics to the presentation in front of a jury of experts. The exercises are build around the Unity fr	amework.	
B0B39PGR	Computer graphics programming	Z,ZK	6
BE4B39VGO	Creating graphic content	Z,ZK	6
The aim of this course i	s to provide theory behind geometric modeling and modeling of materials, give students an overview of methods used in the	process of creatin	ng 2D and 3D
graphics and how to app	bly those methods in praxis. At the seminars, students will learn how to design and create three-dimensional scene, create and	d apply textures in	nitating materials
(e.g., wall finishes, woo	d, sky) and geometrical details, and position and set-up lights in the scene.		
B4B36ZUI	Introduction to Artificial Intelligence	Z,ZK	6
The aim of the course is	to cover the basics of symbolic artificial intelligence. We will focus on algorithms of informed and uninformed state space se	arch, problem rep	presentation and
solving, representation	of knowledge using formal logic, methods of automated reasoning, and an introduction to Markov decision making, and to tw	o-player games. T	his course is
also part of the inter-un	versity programme prg.ai Minor. It pools the best of AI education in Prague to provide students with a deeper and broader in	sight into the field	of artificial

intelligence. More information is available at https://prg.ai/minor.

Name of the block: Compulsory elective courses Minimal number of credits of the block: 0 The role of the block: PV

Code of the group: 2018_BOIAPP Name of the group: Subjects in english Requirement credits in the group: Requirement courses in the group: In this group you have to complete at least 1 course

Credits in the group: 0

Note on the group: ~Studenti programu Otevřená informatika musí v bakalářském studiu projít alespoň jedním anglicky přednášeným povinným předmětem programu či oboru. Bližší podmínky jsou uvedeny na stránce https://oi.fel.cvut.cz/cs/bakalarsky-program (sekce Jazyková příprava). Níže je uveden seznam doporučených předmětů, kterými můžete tuto povinnost splnit. Pokud je česká varianta součástí vašeho povinného studijního plánu, pochopitelně vam anglická varianta nahradí tuto českou. Kromě uvedeného seznamu lze povinnost splnit zápisem anglicky přednášeného předmětu na zahraniční stáži (Erasmus, apod.). V obou výše uvedených

případech bude povinnost v KOSu splněna automaticky. Poslední možností je splnit tuto povinnost na žádost jinak (předmět mimo seznam, bakalářská práce vedená zahraničním vedoucím, apod.).\\

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
BE4B33SEA	Subject in english - abroad	Z,ZK	0		Z,L	PV
BE5B32PKS	Computer and Communication Networks Leoš Bohá, Tomáš Van k, Pavel Bezpalec Zbyn k Kocur Leoš Bohá (Gar.)	Z,ZK	6	2P + 2C	z	PV
BE5B35APO	Computer Architectures Pavel Píša, Richard Šusta Pavel Píša Pavel Píša (Gar.)	Z,ZK	6	2P+2L	L	PV
BE4B38PSIA	Computer Networks Ji í Novák, Jan Holub Ji í Novák Ji í Novák (Gar.)	Z,ZK	5	2P+2L	L	PV
BE4B36FUP	Functional Programming Niklas Maximilian Heim, Rostislav Hor ík Rostislav Hor ík Michal P chou ek (Gar.)	Z,ZK	6	2P+2C	L	PV
BE4B36ZUI	Introduction to Artificial Intelligence Viliam Lisý, Branislav Bošanský Branislav Bošanský Branislav Bošanský (Gar.)	Z,ZK	6	2P+2C	L	PV
BE5B35LSP	Logic Systems and Processors Richard Šusta, Martin Hlinovský Martin Hlinovský Richard Šusta (Gar.)	Z,ZK	6	3P+2L	Z	PV
BE5B33RPZ	Pattern Recognition and Machine Learning Ond ej Drbohlav, Ji í Matas, Jan Šochman Ji í Matas Ji í Matas (Gar.)	Z,ZK	6	2P+2C	Z	PV
BE4B39VGO	Creating graphic content Ladislav molík Ladislav molík (Gar.)	Z,ZK	6	2P+2C+8D	Z	PV
Characteristics of the	e courses of this group of Study Plan: Code=2018_BOIAPP Nan	ne=Subjects	in englis	sh		
The aim of this course is to graphics and how to apply th	eating graphic content provide theory behind geometric modeling and modeling of materials, give students an nose methods in praxis. At the seminars, students will learn how to design and create thr sy) and geometrical details, and position and set-up lights in the scene.			the proces		
BE4B33SEA Su	ibject in english - abroad			Z	Z,ZK	0
	ation of the duty to complete at least one compulsory course of the program in English. In properties and Communication Networks				Z,ZK	6
	amiliarize students with current trends in the switched local networks and the key funct	ions of routing pr	otocols in IF		· 1	-
	· · · · · · · · · · · · · · · · · · ·	51				
	oretically.					
primarily practically then the	oretically. omputer Architectures			Z	Z,ZK	6
primarily practically then the BE5B35APO CC Subject provides overview c	omputer Architectures If basic building blocks of computer systems. Explanation starts from hardware side wh			sented in th	e previous lect	ures of
primarily practically then the BE5B35APO CC Subject provides overview c	omputer Architectures			sented in th	e previous lect	ures of
primarily practically then the BE5B35APO CC Subject provides overview c Structures of computer syst and buses topologies. Empt	omputer Architectures of basic building blocks of computer systems. Explanation starts from hardware side wh ems. Topics cover building blocks description, CPU structure, multiple processors intercon nasis is placed on clarification of interconnection of hardware components with software	connections, inpu e support, mainly	t/output sub lower levels	sented in th system and of operatin	e previous lect basic overview g systems, dev	ures of of netwo ice driver
primarily practically then the BE5B35APO CC Subject provides overview c Structures of computer syst and buses topologies. Empt and virtualization technique	omputer Architectures of basic building blocks of computer systems. Explanation starts from hardware side wh ems. Topics cover building blocks description, CPU structure, multiple processors interconasis is placed on clarification of interconnection of hardware components with software s. General principles are more elaborated during presentation of examples of multiple s	connections, inpu e support, mainly standard CPU arc	t/output sub lower levels	sented in th system and of operatin	e previous lect basic overview g systems, dev	ures of of netwo ice driver
primarily practically then the BE5B35APO CC Subject provides overview c Structures of computer syst and buses topologies. Empt and virtualization technique	omputer Architectures of basic building blocks of computer systems. Explanation starts from hardware side wh ems. Topics cover building blocks description, CPU structure, multiple processors intercon nasis is placed on clarification of interconnection of hardware components with software	connections, inpu e support, mainly standard CPU arc	t/output sub lower levels	sented in th system and of operatin Exercises ar	e previous lect basic overview g systems, dev e more focused	ures of of netwo ice driver
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structure, cache, and pipeline processing. BE5B33RPZ Pattern Recognition and Machine Learning

Z,ZK The basic formulations of the statistical decision problem are presented. The necessary knowledge about the (statistical) relationship between observations and classes of objects is acquired by learning on the raining set. The course covers both well-established and advanced classifier learning methods, as Perceptron, AdaBoost, Support Vector Machines, and Neural Nets. This course is also part of the inter-university programme prg.ai Minor. It pools the best of AI education in Prague to provide students with a deeper and broader insight into the field of artificial intelligence. More information is available at https://prg.ai/minor.

6

using circuit simulation. Practical problems are solved using development boards used at hundreds of leading universities around the world. The course ends with RISC-V processor

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

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
B0B16ET1	Ethic 1 Vladimír Sláme ka Vladimír Sláme ka Vladimír Sláme ka (Gar.)	KZ	4	2P+2C	Z	V
B0B16FIL	Philosophy Peter Zamarovský Peter Zamarovský Peter Zamarovský (Gar.)	ZK	2	2P+0S	Z,L	V
B0B16FI1	Philosophy 1 Peter Zamarovský Peter Zamarovský Peter Zamarovský (Gar.)	KZ	4	2P+2S	Z	V
B0B16HTE	History of technology and economic Marcela Efmertová, Jan Mikeš Marcela Efmertová Marcela Efmertová (Gar.)	ZK	2	2P+0S	Z,L	V
B0B16HT1	History of science and technology 1 Marcela Efmertová, Jan Mikeš Marcela Efmertová Marcela Efmertová (Gar.)	KZ	4	2P+2S	Z	V
B0B16HI1	History 1 Milena Josefovi ová Milena Josefovi ová Milena Josefovi ová (Gar.)	KZ	4	2P+2S	Z	V
B0B16MPS	Psychology Jan Fiala Jan Fiala Jan Fiala (Gar.)	Z,ZK	4	2P+2S	Z,L	V
B0B16MPL	Psychology for managers Jan Fiala Jan Fiala Jan Fiala (Gar.)	ZK	2	2P+0S	Z,L	V

Characteristics of the courses of this group of Study Plan: Code=2018_BOIH Name=Humanities subjects

B0B16ET1	Ethic 1	KZ	4
Aim of this subject i	s to provide the students an orientation not only in general problems of ethics but above all to offer instructions for s	olving various situations of hun	han life. Essentia
parts of the subject	are discussions in which students can react to lectures but also to actual questions coming with news and look for	the communal answers.	
B0B16FIL	Philosophy	ZK	2
	ost important persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary r hts with recent problems of science, technology, economics and politics.	nature of philosophy and conne	ction of old
B0B16FI1	Philosophy 1	KZ	4
We deal with the me	ost important persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary r	nature of philosophy and conne	ction of old
philosophical thoug	hts with recent problems of science, technology, economics and politics.		
B0B16HTE	History of technology and economic	ZK	2
B0B16HT1	History of science and technology 1	KZ	4
B0B16HI1	History 1	KZ	4
B0B16MPS	Psychology	Z,ZK	4
	Psychology for managers	ZK	

Code of the group: 2015_BJKA Name of the group: English language courses 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
B0B04A21	English Language A2-1 Dana Saláková	Z		2s	Z	V
B0B04A22	English Language A2-2 Dana Saláková	Z	0	2s	L	V
B0B04B11	English Language B1-1 Petra Juna Jennings Petra Juna Jennings (Gar.)	Z	0	2C	Z	V
B0B04B12	English Language B1-2 Petra Juna Jennings Petra Juna Jennings (Gar.)	Z	0	2C	L	V
B0B04B21	English Language B2-1 Petra Juna Jennings Petra Juna Jennings (Gar.)	Z	3	2C	Z	V
B0B04B22	English Language B2-2 Petra Juna Jennings Petra Juna Jennings (Gar.)	Z	3	2C	Z,L	V

Characteristics of the courses of this group of Study Plan: Code=2015_BJKA Name=English language courses

B0B04A21	English Language A2-1	Z	
The course is open	o students who are beginners in their second language. Course objective: Achieving competence in basic English.		
B0B04A22	English Language A2-2	Z	0
The course is open	o students who are beginners in their second foreign language. The course objective is to develop and sustain their basic know	ledge of the Engli	ish language.
B0B04B11	English Language B1-1	Z	0
Course objective: Br	padening the basic knowledge of general English; mastering basic specialised language; focusing on text analysis and vocabulary	expansion; unde	rstanding spoker
English.			
B0B04B12	English Language B1-2	Z	0
Course objective: Br	padening the basic knowledge of general English; mastering basic specialised language; focusing on text analysis and vocabulary	expansion; unde	rstanding spoker
English.			
B0B04B21	English Language B2-1	Z	3
This course is design	ned as a full-year, two semester preparation course for the university's compulsory B2-level English Examination (Anglický jazyk	B2 - zkouška - B0	B04B2Z*). While
the course is focuse	d on helping students reach a level required to pass the B2-level English Examination (or improve their English for a higher mar	k), it also focuses	more on the
academic and techn	cal vocabulary and grammar expected of students at the university level. *NOTE: This exam is also used for determining an appro	priate level of Eng	glish for Erasmus
/ International Study			
B0B04B22	English Language B2-2	Z	3
This course is design	ned as a full-year, two semester preparation course for the university's compulsory B2-level English Examination (Anglický jazyk	B2 - zkouška - B0	B04B2Z *). While
the course is focuse	d on helping students reach a level required to pass the B2-level English Examination (or improve their English for a higher mar	k), it also focuses	more on the
academic and techn / International Study	cal vocabulary and grammar expected of students at the university level. *NOTE: This exam is also used for determining an appro	priate level of En	glish for Erasmu

Code of the group: BTV Name of the group: Physical education 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
TVV	Physical education	Z	0	0+2	Z,L	V
A003TV	Physical Education	Z	2	0+2	L,Z	V
TV-V1	Physical education	Z	1	0+2	Z,L	V
TVV0	Physical education	Z	0	0+2	Z,L	V

Characteristics of the courses of this group of Study Plan: Code=BTV Name=Physical education

TVV	Physical education	Z	0
A003TV	Physical Education	Z	2
TV-V1	Physical education	Z	1
TVV0	Physical education	Z	0

Code of the group: BTVK

Name of the group: Physical education courses

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
TVKLV	Physical Education Course	Z	0	7dní	L	V
TVKZV	Physical Education Course	Z	0	7dní	Z	V

Characteristics of the courses of this group of Study Plan: Code=BTVK Name=Physical education courses

TVKLV	Physical Education Course	Z	0
TVKZV	Physical Education Course	Z	0

Code of the group: 2018_BOIVOL Name of the group: Elective subjects Requirement credits in the group: Requirement courses in the group: ~Nabídku volitelných předmětů uspořádaných podle kateder najdete na webových stránkách http://www.fel.cvut.cz/cz/education/volitelne-predmety.html\\

List of courses of this pass:

Code	Name of the course	Completion	Credits
A003TV	Physical Education	Z	2
B0B01LAG	Linear Algebra	Z,ZK	8
	e initial parts of linear algebra. Firstly, the basic notions of a linear space and linear mappings are covered (linear dependence and inde matrices (determinants, inverse matrices, matrices of a linear map, eigenvalues and eigenvectors, diagonalisation, etc) is covered r solving systems of linear equations, the geometry of a 3D space (including the scalar product and the vector product) and SV	next. The applicati	
B0B01LGR	Logic anad Graphs	Z,ZK	5
This course covers ba	sics of mathematical logic and graph theory. Syntax and semantics of propositional and predicate logic are introduced. The importance and of the relationship between a formula and its model is stressed. Further, basic notions from graph theory are introduced		onsequence
B0B01MA1	Mathematical Analysis 1 The aim of the course is to introduce students to basics of differential and integral calculus of functions of one variable.	Z,ZK	7
B0B01MA2	Mathematical Analysis 2 an introduction to the differential and integral calculus in several variables and basic relations between curve and surface integrals. series and power series with application to Taylor and Fourier series.	Z,ZK Other part contair	7 ns function
B0B01PST	Probability and Statistics	Z,ZK	7
B0B04A21	English Language A2-1	Z	
	The course is open to students who are beginners in their second language. Course objective: Achieving competence in basic Er	nglish.	I
B0B04A22	English Language A2-2	Z	0
	to students who are beginners in their second foreign language. The course objective is to develop and sustain their basic knowled	lge of the English	language.
B0B04B11 Course objective: Bro	English Language B1-1 adening the basic knowledge of general English; mastering basic specialised language; focusing on text analysis and vocabulary exp English.	Z ansion; understan	0 ding spoken
B0B04B12	English Language B1-2	Z	0
	adening the basic knowledge of general English; mastering basic specialised language; focusing on text analysis and vocabulary exp English.		-
B0B04B1K	English language B1 - classified assessment verifying of the student's skills of B1 level	KZ	0
B0B04B21	English Language B2-1	Z	3
	ed on helping students reach a level required to pass the B2-level English Examination (or improve their English for a higher mark), cal vocabulary and grammar expected of students at the university level. *NOTE: This exam is also used for determining an appropria / International Study.		
B0B04B22	English Language B2-2	Z	3
the course is focuse	ed as a full-year, two semester preparation course for the university's compulsory B2-level English Examination (Anglický jazyk B2 - ed on helping students reach a level required to pass the B2-level English Examination (or improve their English for a higher mark), cal vocabulary and grammar expected of students at the university level. *NOTE: This exam is also used for determining an appropriate	it also focuses me	ore on the
	/ International Study.		-
B0B04B2Z	English language B2 - exam	Z,ZK	0
	am is a compulsory subject for all Faculty of Electrical Engineering students at the Czech Technical University. According to the Stud ents at CTU (Part III, Article 4), a compulsory subject is one "whose completion is a necessary condition in order to successfully con	-	
In addition, this req	uires the "passing of an examination evaluated on the scale A, B, C, D, or E…" (SERR Part III, Article 6). II) According to the Comm iges (CEFR), an international standard for describing language ability, the definition of an English language learner who has achieve	ion European Fran	mework of itermediate)
level is one who "c	an understand the main ideas of complex text on both concrete and abstract topics, including technical discussions in his/her field of ency and spontaneity that makes regular interaction with native speakers guite possible without strain for either party. Can produce of		
level is one who "c with a degree of flue range of subjects ar	an understand the main ideas of complex text on both concrete and abstract topics, including technical discussions in his/her field of ency and spontaneity that makes regular interaction with native speakers quite possible without strain for either party. Can produce on and explain a viewpoint on a topical issue giving the advantages and disadvantages of various options." III) Students who have succes thin the past five years may present their certificate to the Department of Languages, Faculty of Electrical Engineering.Upon appro- from both the Written Test and the Oral Part. For a list of approved international exams go the department website: http://jazyky.fel.	clear, detailed text essfully passed an val, students are t	on a wide approved
level is one who "c with a degree of flue range of subjects ar	ency and spontaneity that makes regular interaction with native speakers quite possible without strain for either party. Can produce and explain a viewpoint on a topical issue giving the advantages and disadvantages of various options." III) Students who have succe thin the past five years may present their certificate to the Department of Languages, Faculty of Electrical Engineering Upon appro	clear, detailed text essfully passed an val, students are t	on a wide approved
level is one who "c with a degree of flue range of subjects ar international exam wi B0B16ET1 Aim of this subject is	ency and spontaneity that makes regular interaction with native speakers quite possible without strain for either party. Can produce and explain a viewpoint on a topical issue giving the advantages and disadvantages of various options." III) Students who have succe thin the past five years may present their certificate to the Department of Languages, Faculty of Electrical Engineering Upon appro from both the Written Test and the Oral Part. For a list of approved international exams go the department website: http://jazyky.fel.	clear, detailed text assfully passed an val, students are t cvut.cz/ KZ ations of human li	on a wide approved hen exempt
level is one who "c with a degree of flue range of subjects ar international exam wi B0B16ET1 Aim of this subject is	ency and spontaneity that makes regular interaction with native speakers quite possible without strain for either party. Can produce on dexplain a viewpoint on a topical issue giving the advantages and disadvantages of various options." III) Students who have succes this the past five years may present their certificate to the Department of Languages, Faculty of Electrical Engineering. Upon approximation both the Written Test and the Oral Part. For a list of approved international exams go the department website: http://jazyky.fel. Ethic 1 to provide the students an orientation not only in general problems of ethics but above all to offer instructions for solving various situ	clear, detailed text assfully passed an val, students are t cvut.cz/ KZ ations of human li	on a wide approved hen exempt
level is one who "…c with a degree of flue range of subjects ar international exam wi B0B16ET1 Aim of this subject is parts of th B0B16FI1 We deal with the n	ency and spontaneity that makes regular interaction with native speakers quite possible without strain for either party. Can produce on dexplain a viewpoint on a topical issue giving the advantages and disadvantages of various options." III) Students who have succes this the past five years may present their certificate to the Department of Languages, Faculty of Electrical Engineering. Upon approximation both the Written Test and the Oral Part. For a list of approved international exams go the department website: http://jazyky.fel. Ethic 1 to provide the students an orientation not only in general problems of ethics but above all to offer instructions for solving various situ ne subject are discussions in which students can react to lectures but also to actual questions coming with news and look for the compared to the compared but also to actual questions coming with news and look for the compared but also to actual questions coming with news and look for the compared but also to actual questions coming with news and look for the compared but also to actual questions coming with news and look for the compared but also to actual questions coming with news and look for the compared but also to actual questions coming with news and look for the compared but also to actual questions coming with news and look for the compared but also to actual questions coming with news and look for the compared but also to actual questions coming with news and look for the compared but also to actual questions coming with news and look for the compared but also to actual questions coming with news and look for the compared but also to actual questions coming with news and look for the compared but also to actual questions coming with news and look for the compared but also to actual questions coming with news and look for the compared but also to actual questions coming with news and look for the compared but also to actual questions coming with news and look for the compared but also to actual questions coming with news and loo	clear, detailed text assfully passed an val, students are t cvut.cz/ KZ ations of human li immunal answers. KZ ophy and connection	: on a wide approved hen exempt 4 fe. Essential 4 on of old
level is one who "c with a degree of flue range of subjects ar international exam wi B0B16ET1 Aim of this subject is parts of the B0B16FI1 We deal with the m B0B16FIL	ency and spontaneity that makes regular interaction with native speakers quite possible without strain for either party. Can produce of dexplain a viewpoint on a topical issue giving the advantages and disadvantages of various options." III) Students who have succes thin the past five years may present their certificate to the Department of Languages, Faculty of Electrical Engineering. Upon approximate from both the Written Test and the Oral Part. For a list of approved international exams go the department website: http://jazyky.fel. Ethic 1 to provide the students an orientation not only in general problems of ethics but above all to offer instructions for solving various situes esubject are discussions in which students can react to lectures but also to actual questions coming with news and look for the composite important persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of philosophy.	clear, detailed text essfully passed an val, students are t cvut.cz/ KZ ations of human li mmunal answers. KZ ophy and connection ZK	c on a wide approved hen exempt 4 fe. Essential 4 ion of old 2
level is one who "…c with a degree of flue range of subjects ar international exam wi B0B16ET1 Aim of this subject is parts of th B0B16FI1 We deal with the m B0B16FIL	ency and spontaneity that makes regular interaction with native speakers quite possible without strain for either party. Can produce of a explain a viewpoint on a topical issue giving the advantages and disadvantages of various options." III) Students who have succes this in the past five years may present their certificate to the Department of Languages, Faculty of Electrical Engineering. Upon approximate the Written Test and the Oral Part. For a list of approved international exams go the department website: http://jazyky.fel. Ethic 1 to provide the students an orientation not only in general problems of ethics but above all to offer instructions for solving various situe a subject are discussions in which students can react to lectures but also to actual questions coming with news and look for the complexity of the problems of science, technology, economics and politics. Philosophy 1 nost important persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of philosophy nost important persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of philosophy is the problems of science, technology, economics and politics. Philosophy 1 nost important persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of philosophy is the problems of science and problems of science and politics. Philosophy 1 nost important persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of philosophy is the problems of science are especially on transdisciplinary nature of philosophy is the persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of philosophy is the persons and politics.	clear, detailed text essfully passed an val, students are t cvut.cz/ KZ ations of human li mmunal answers. KZ ophy and connection ZK	c on a wide approved hen exempt 4 fe. Essential 4 ion of old 2
level is one who "c with a degree of flue range of subjects ar international exam wi BOB16ET1 Aim of this subject is to parts of the BOB16FI1 We deal with the me BOB16FIL We deal with the me	ency and spontaneity that makes regular interaction with native speakers quite possible without strain for either party. Can produce of a explain a viewpoint on a topical issue giving the advantages and disadvantages of various options." III) Students who have succes this in the past five years may present their certificate to the Department of Languages, Faculty of Electrical Engineering. Upon approximately from both the Written Test and the Oral Part. For a list of approved international exams go the department website: http://jazyky.fel. Ethic 1 to provide the students an orientation not only in general problems of ethics but above all to offer instructions for solving various situe a subject are discussions in which students can react to lectures but also to actual questions coming with news and look for the complexity of the problems of science, technology, economics and politics. Philosophy 1 nost important persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of philosophy nost important persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of philosophical thoughts with recent problems of science, technology, economics and politics.	clear, detailed text assfully passed an val, students are t cvut.cz/ KZ ations of human li mmunal answers. KZ ophy and connection ZK ophy and connection	: on a wide approved hen exempt 4 fe. Essential 4 ion of old 2 ion of old

B0B16MPL	Psychology for managers	ZK	2		
B0B16MPS	Psychology	Z,ZK	4		
B0B33OPT	Optimization	Z,ZK	7		
	s an introduction to mathematical optimization, specifically to optimization in real vector spaces of finite dimension. The theory is illustrat		of examples.		
	You will refresh and extend many topics that you know from linear algebra and calculus courses.				
B0B35APO	Computer Architectures	Z,ZK	5		
B0B36DBS	Database Systems	Z,ZK	6		
The course is desig	ned as a basic database course mainly aimed at the student ability to design a relational data model and to use the SQL language for	or data definition a	s well as for		
data querying and	to choose the appropriate degree of transaction isolation. Students will also get acquainted with the most commonly used indexing t	-	se system		
	architecture and their management. They will verify their knowledge during the elaboration of a continuously submitted seminar				
B0B36PJV	Programming in Java	Z,ZK	6		
	In the basics of algorithms and programming from the first semester and introduces students to the Java environment. The course also	-	-		
	e. The topics of the course includes exceptions, event handling, and building a graphical interface. Basic library methods, working with In important topic is models of multithreaded applications and their implementation. Practical exercises of practical skills and knowled				
	sks and semester work, which will be submitted continuously through the source code version control system. The semester work sc	-			
01	correctness and efficiency of the code, as well as points that take into account the quality of the source codes, their readability and r				
B0B36PRP	Procedural Programming	Z,ZK	6		
	anies basic programming emphasizing the data representation in computer memory. Furthermore, the concepts of linked data structur	es and processing	user inputs		
are developed. S	tudents master the practical implementation of simple individual tasks. The course emphasizes acquiring programming habits for creating	ating readable and	reusable		
	me time, the effort is to build students an overview of the program operation, data model, memory access, and management. Therefore				
	s a direct link between the program data structures and their representation in the computer memory. Students will get acquainted not	, , ,	•		
-	with debugging and profiling. Labs aim to acquire practical skills of implementing simple individual tasks, emphasizing functionality an				
	lence is developed by a set of homework with the possibility of optional and bonus assignments. The final task is an integration of a la olementations. Evaluation of coding style motivated by writing legible, understandable, and maintainable codes is also a part of the so		ig existing		
B0B39PGR	Computer graphics programming	Z,ZK	6		
B4B01DMA	Discrete Mathematics	Z.ZK	5		
	nts meet some important topics from the field of discrete mathematics. Namely, they will explore divisibility and calculations modulo n,	_,	-		
	gs, cardinality of sets, induction, and recurrence equations. The second aim of this course is to teach students the language of math		-		
	actively, and introduce them to mathematics as science.				
B4B33ALG	Algorithms	Z,ZK	6		
In the course, the a	lgorithms development is constructed with minimum dependency to programming language; nevertheless the lectures and seminars				
types a data strue	ctures, basic algorithms, recursive functions, abstract data types, stack, queues, trees, searching, sorting, special application algorith	ms, Dynamic prog	ramming.		
	Students are able to design and construct non-trivial algorithms and to evaluate their effectivity.				
B4B33RPH	Solving Problems and other Games	KZ	6		
	on is to let students to deal with real-world problems properly. When working on real problems the student shall learn how to decomp				
	how to test and validate individual steps and so on. Many problems will actually be beyond the first-year-student skills. And many pro unsolved parts should motivate the students to study difficult theoretical subjects. They should generate the important questions. Idea				
	be eager to study deeper about informatics. The course also explains the basis of the object oriented design, software testing, ways f	-	-		
	codes.	or writing rouddble			
B4B35OSY	Operating Systems	Z,ZK	4		
	operation system's basic concepts and principles as processes, threads, communication and synchronization, virtual memory, driver		sic security		
aspects. These top	ics are theoretically described and demonstrated on Linux and Windows OS with multi-core systems. Practical exercises from OS in	C programming la	nguage will		
	be solved on labs. Students will work with Linux OS and micro-kernel NOVA.				
B4B36PDV	Parallel and Distributed Computing	Z,ZK	6		
B4B36ZUI	Introduction to Artificial Intelligence	Z,ZK	6		
	se is to cover the basics of symbolic artificial intelligence. We will focus on algorithms of informed and uninformed state space search				
	ation of knowledge using formal logic, methods of automated reasoning, and an introduction to Markov decision making, and to two-				
also part of the in	nter-university programme prg.ai Minor. It pools the best of AI education in Prague to provide students with a deeper and broader ins intelligence. More information is available at https://prg.ai/minor.	ight into the field o	rartificial		
B4B38PSIA	Computer Networks	Z,ZK	5		
	Computer Networks	Z,ZK Z,ZK	6		
B4B39HRY Students familiarize	themselves with the issues encountered during programming computer games. They learn topics such as 3D model representation, a				
	and real-time rendering in the context of computer games development. During exercises they will develop a computer game in team				
	document, through programming game mechanics to the presentation in front of a jury of experts. The exercises are build around the	•			
B4B39IUR	User interfaces implementation	Z,ZK	6		
	nterface specification (created by design team), the student will be able to implement user interface and communicate efficiently with				
	in the whole process of design, testing, and implementation of the user interface.				
B4BPROJ6	Unassisted project	Z	6		
BBAP20	Bachelor thesis	Z	20		
BE4B33SEA	Subject in english - abroad	Z,ZK	0		
	The subject serves for validation of the duty to complete at least one compulsory course of the program in English.				
BE4B36FUP	Functional Programming	Z,ZK	6		
	ces students into the techniques of functional programming, the advantages and disadvantages of this programming paradigm, and its	-			
	sense that the programmer symbolically describes the problem to be solved, rather than specifying the exact sequence of operation				
-	sence of the solved problem and implementing even more complex algorithms compactly. Functional programming has notable adva on of algorithms, and the most useful functional programming concepts are increasingly often introduced to standard programming lar				
	mming on symbols, rather than numbers, functional programming has been heavily used in in artificial intelligence fields, such as agent				
	se is also part of the inter-university programme prg.ai Minor. It pools the best of AI education in Prague to provide students with a de				
the field of artificial intelligence. More information is available at https://prg.ai/minor.					

BE4B36ZUI	Introduction to Artificial Intelligence	Z,ZK	6			
The aim of the cou	rse is to cover the basics of symbolic artificial intelligence. We will focus on algorithms of informed and uninformed state space search	h, problem represe	ntation and			
solving, representation of knowledge using formal logic, methods of automated reasoning, and an introduction to Markov decision making, and to two-player games. This course is						
also part of the i	nter-university programme prg.ai Minor. It pools the best of AI education in Prague to provide students with a deeper and broader ins	ight into the field of	fartificial			
	intelligence. More information is available at https://prg.ai/minor.	T				
BE4B38PSIA	Computer Networks	Z,ZK	5			
	I to principles and technologies of Computer Networks. Physical layer media, analog and digital modulations, network topologies, MA		• · · ·			
data communicat	ion models, coding and cryptography basics are introduced. Widely used LAN technologies are then presented together with their fea	atures. Internet prof	tocols are			
	explained and internetworking approaches are presented.					
BE4B39VGO	Creating graphic content	Z,ZK	6			
	urse is to provide theory behind geometric modeling and modeling of materials, give students an overview of methods used in the pr	-				
graphics and now to	b apply those methods in praxis. At the seminars, students will learn how to design and create three-dimensional scene, create and ap	ply textures imitatin	ig materials			
DEEDOODKO	(e.g., wall finishes, wood, sky) and geometrical details, and position and set-up lights in the scene.	7 71/	6			
BE5B32PKS	Computer and Communication Networks		6			
The aim of the cou	rse is to familiarize students with current trends in the switched local networks and the key functions of routing protocols in IP networl primarily practically then theoretically.	<s. a<="" course="" is="" td="" the=""><td>Imed rather</td></s.>	Imed rather			
BE5B33RPZ	Pattern Recognition and Machine Learning	Z,ZK	6			
The basic formulat	ions of the statistical decision problem are presented. The necessary knowledge about the (statistical) relationship between observat	ions and classes o	f objects is			
acquired by learning	ng on the raining set. The course covers both well-established and advanced classifier learning methods, as Perceptron, AdaBoost, S	Support Vector Mac	hines, and			
Neural Nets. This of	course is also part of the inter-university programme prg.ai Minor. It pools the best of AI education in Prague to provide students with	a deeper and broa	der insight			
	into the field of artificial intelligence. More information is available at https://prg.ai/minor.					
BE5B35APO	Computer Architectures	Z,ZK	6			
	overview of basic building blocks of computer systems. Explanation starts from hardware side where it extends knowledge presented	-				
	uter systems. Topics cover building blocks description, CPU structure, multiple processors interconnections, input/output subsystem a					
	ies. Emphasis is placed on clarification of interconnection of hardware components with software support, mainly lower levels of open					
and virtualization	techniques. General principles are more elaborated during presentation of examples of multiple standard CPU architectures. Exercise		ed on the			
	software view to the contrary. Students are lead from basic programming on CPU level to the interaction with raw hardware					
BE5B35LSP	Logic Systems and Processors	Z,ZK	6			
	ices the basic hardware structures of computing resources, their design, and architecture. It provides an overview of the possibilities		· .			
	el and the design of embedded processor systems with peripherals on modern FPGA programmable logic circuits, which are increasing cription in VHDL, from logic to more complex sequential circuits to practical finite state machine (FSM) designs. They will also master					
	ation. Practical problems are solved using development boards used at hundreds of leading universities around the world. The course	•	· .			
using circuit sinuit	structure, cache, and pipeline processing.		processor			
BEZB	Safety in Electrical Engineering for a bachelor's degree	Z	0			
The purpose of the	safety course is to give the students basic knowledge of electrical equipment and installation as to avoid danger arising from operation	n of it. This introduc	tory course			
contains funda	amentals of Safety Electrical Engineering. In this way the students receive qualification of instructed person that enables them to work	on electrical equir	pment.			
BEZZ	Basic health and occupational safety regulations	Z	0			
The guidelines wer	e worked out based on The Training Scheme for Health and Occupational Safety designed for employees and students of the Czech	echnical University	/ in Prague,			
which was provide	d by the Rector's Office of the CTU. Safety is considered one of the basic duties of all employees and students. The knowledge of He	alth and Occupation	onal Safety			
	regulations forms an integral and permanent part of qualification requirements. This program is obligatory.					
TV-V1	Physical education	Z	1			
TVKLV	Physical Education Course	Z	0			
TVKZV	Physical Education Course	Z	0			
TVV	Physical education	Z	0			
TVV0	Physical education	Z	0			

For updated information see <u>http://bilakniha.cvut.cz/en/f3.html</u> Generated: day 2024-07-27, time 08:42.