Recomended pass through the study plan

Name of the pass: Branch Software - Passage through study

Faculty/Institute/Others:

Department:

Pass through the study plan: Open Informatics - Software 2016 Branch of study guranteed by the department: Welcome page

Guarantor of the study branch: Program of study: Welcome page Type of study: unknown full-time

Note on the pass:

Coding of roles of courses and groups of courses:

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

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

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

Number of semester: 1

Code	Name of the course / Name of the group of courses (in case of groups of courses the list of codes of their members) Tutors, authors and guarantors (gar.)	Completion	Credits	Scope	Semester	Role
B4B01DMA	Discrete Mathematics Petr Habala Petr Habala (Gar.)	Z,ZK	5	2P+2S	Z	Р
B0B01LAG	Linear Algebra Daniel Gromada, Ji í Velebil, Jakub Rondoš, Natalie Žukovec, Mat j Dostál Ji í Velebil Ji í Velebil (Gar.)	Z,ZK	8	4P+2S	Z	Р
B0B36PRP	Procedural Programming Jan Faigl Jan Faigl (Gar.)	Z,ZK	6	2P+2C	Z	Р
B4B33RPH	Solving Problems and other Games Tomáš Svoboda, Petr Pošík Petr Pošík Tomáš Svoboda (Gar.)	KZ	6	2P+3C	Z	Р
BEZZ	Basic Health and Occupational Safety Regulations Vladimír K la, Radek Havlí ek, Ivana Nová Radek Havlí ek Vladimír K la (Gar.)	Z	0	2BP+2BC	Z	Р
2015_BOIVOL	Volitelné odborné p edm ty	Min. cours.	Min/Max 0/999			V

Number of semester: 2

Code	Name of the course / Name of the group of courses (in case of groups of courses the list of codes of their members) Tutors, authors and guarantors (gar.)	Completion	Credits	Scope	Semester	Role
B0B35APO	Computer Architectures Pavel Píša, Richard Šusta, Petr Št pán Pavel Píša Pavel Píša (Gar.)	Z,ZK	5	2P+2L	L	Р
BEZB	Safety in Electrical Engineering for a Bachelor's Degree Vladimír K la, Radek Havlí ek, Ivana Nová Radek Havlí ek Vladimír K la (Gar.)	Z	0	2BP+2BC	Z,L	Р
B0B01LGR	Logic and Graphs Natalie Žukovec, Mat j Dostál, Alena Gollová Mat j Dostál Marie Demlová (Gar.)	Z,ZK	5	3P+2S	Z,L	Р
B0B01MA1	Mathematical Analysis 1 Martin K epela, Josef Tkadlec, Josef Dvo ák, Veronika Sobotíková Josef Tkadlec Josef Tkadlec (Gar.)	Z,ZK	7	4P+2S	Z,L	Р
B4B38PSIA	Computer Networks Ji í Novák, Jan Holub Ji í Novák Ji í Novák (Gar.)	Z,ZK	5	2P+2L	L	Р
B0B36PJV	Programming in Java Martin Mudroch, Ji í Vok ínek, Ladislav Serédi Ji í Vok ínek Ji í Vok ínek (Gar.)	Z,ZK	6	2P+3C+7D	L	Р
2015_BOIVOL	Volitelné odborné p edm ty	Min. cours.	Min/Max 0/999			V

Number of semester: 3

Code	Name of the course / Name of the group of courses (in case of groups of courses the list of codes of their members) Tutors, authors and guarantors (gar.)	Completion	Credits	Scope	Semester	Role
B4B33ALG	Algorithms Daniel Pr ša, Robert P ni ka Daniel Pr ša Daniel Pr ša (Gar.)	Z,ZK	6	2P+2C	Z	Р
B0B01MA2	Mathematical Analysis 2 Martin Bohata, Miroslav Korbelá, Petr Hájek, Jaroslav Tišer, Karel Pospíšil, Paola Vivi, Hana Tur inová Martin Bohata Jaroslav Tišer (Gar.)	Z,ZK	7	4P+2S	L,Z	Р
B4B35OSY	Operating Systems Petr Št pán, Michal Sojka Michal Sojka Michal Sojka (Gar.)	Z,ZK	4	2P+2C	Z	Р
B0B01PST	Probability and Statistics Kate ina Helisová, Jakub Stan k Kate ina Helisová Kate ina Helisová (Gar.)	Z,ZK	7	4P+2S	Z	Р
B4B36ONM	Object-oriented design and Modeling	Z,ZK	6	2P+2C	Z	PO

Number of semester: 4

Code	Name of the course / Name of the group of courses (in case of groups of courses the list of codes of their members) Tutors, authors and guarantors (gar.)	Completion	Credits	Scope	Semester	Role
B0B36DBS	Database Systems Martin imná , Václav Kratochvíl Martin imná Martin imná (Gar.)	Z,ZK	6	2P+2C+4D	L	Р
B0B33OPT	Optimization Tomáš Werner, Petr Olšák, Mirko Navara, Tomáš Kroupa Tomáš Kroupa Tomáš Werner (Gar.)	Z,ZK	7	4P+2C	Z,L	Р
B4B36PDV	Parallel and Distributed Computing Mat j Kafka, Michal Jakob Michal Jakob (Gar.)	Z,ZK	6	2P+2C	L	Р
B4B36FUP	Functional Programming Rostislav Hor ík, Tomáš Votroubek Rostislav Hor ík Michal P chou ek (Gar.)	Z,ZK	6	2P+2C	L	PO
2015_BOIVOL	Volitelné odborné p edm ty	Min. cours.	Min/Max 0/999			V

Number of semester: 5

Code	Name of the course / Name of the group of courses (in case of groups of courses the list of codes of their members) Tutors, authors and guarantors (gar.)	Completion	Credits	Scope	Semester	Role
B4BPROJ6	Unassisted project Tomáš Svoboda, Petr Pošík, Ji í Šebek, Jaroslav Sloup, Ivan Jelínek, Katarína Žmolíková Jaroslav Sloup	Z	6	0+2	Z,L	Р
B4B39IUR	User interfaces implementation Miroslav Macík Miroslav Macík Miroslav Macík (Gar.)	Z,ZK	6	2P+2S	Z	РО
B4B01JAG	Languages, Automats and Gramatics Marie Demlová, Ji í Demel Marie Demlová Marie Demlová (Gar.)	Z,ZK	6	2P+2S	Z	РО
B4B36SIN	Software Engineering Ji í Šebek, Martin Komárek Martin Komárek (Gar.)	Z,ZK	6	3P+2S	Z	РО
2015 BOIVOL	Volitelné odborné p edm ty	Min. cours.	Min/Max	·		V
20.0_20.002	volueine ouborne p eani ty	0	0/999			•

Number of semester: 6

Code	Name of the course / Name of the group of courses (in case of groups of courses the list of codes of their members) Tutors, authors and guarantors (gar.)	Completion	Credits	Scope	Semester	Role
BBAP20	Bachelor thesis Roman mejla Roman mejla (Gar.)	Z	20	12S	L,Z	Р
2015 POIVOI	Malifestoria adhamat mandon (m	Min. cours.	Min/Max			V
2015_BOIVOL	Volitelné odborné p edm ty	0	0/999			V

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

Kód	Name of the group of courses and codes of members of this group (for specification see here or below the list of courses)	Completion	Credits	Scope	Semester	Role
2015 BOIVOL		Min. cours.	Min/Max			
2013_BOIVOL	Volitelné odborné p edm ty	0	0/999			, v

List of courses of this pass:

Code	Name of the course	Completion	Credits
B0B01LAG	Linear Algebra	Z,ZK	8
The course covers	the initial parts of linear algebra. Firstly, the basic notions of a linear space and linear mappings are covered (linear dependence and ind	ependence, basis, d	coordinates
etc). The calculus	of matrices (determinants, inverse matrices, matrices of a linear map, eigenvalues and eigenvectors, diagonalisation, etc) is covered		ons include
	solving systems of linear equations, the geometry of a 3D space (including the scalar product and the vector product) and S		
B0B01LGR	Logic and Graphs	Z,ZK	5
This course covers	basics of mathematical logic and graph theory. Syntax and semantics of propositional and predicate logic are introduced. The important		onsequence
	and of the relationship between a formula and its model is stressed. Further, basic notions from graph theory are introduce	d.	
B0B01MA1	Mathematical Analysis 1	Z,ZK	7
	The aim of the course is to introduce students to basics of differential and integral calculus of functions of one variable.		
B0B01MA2	Mathematical Analysis 2	Z,ZK	7
The subject cove	rs an introduction to the differential and integral calculus in several variables and basic relations between curve and surface integrals	. Other part contain	s function
	series and power series with application to Taylor and Fourier series.		
B0B01PST	Probability and Statistics	Z,ZK	7
B0B33OPT	Optimization	Z,ZK	7
The course provide	is an introduction to mathematical optimization, specifically to optimization in real vector spaces of finite dimension. The theory is illustra	ted with a number o	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
	ned as a basic database course mainly aimed at the student ability to design a relational data model and to use the SQL language t	. , ,	s well as fo
data querying and	d to choose the appropriate degree of transaction isolation. Students will also get acquainted with the most commonly used indexing	techniques, databa	se system
	architecture and their management. They will verify their knowledge during the elaboration of a continuously submitted semina	r task.	
B0B36PJV	Programming in Java	Z,ZK	6
The course builds	on the basics of algorithms and programming from the first semester and introduces students to the Java environment. The course al	so focus on the obj	ect concep
of the Java langua	ge. The topics of the course includes exceptions, event handling, and building a graphical interface. Basic library methods, working wit	h files and using ge	eneric types
will be introduced.	An important topic is models of multithreaded applications and their implementation. Practical exercises of practical skills and knowled	ge of Java is tested	d in the form
of solving partial ta	sks and semester work, which will be submitted continuously through the source code version control system. The semester work so	coring consists of p	oints for the
	correctness and efficiency of the code, as well as points that take into account the quality of the source codes, their readability and	reusability.	
B0B36PRP	Procedural Programming	Z,ZK	6
The course accomp	vanies basic programming emphasizing the data representation in computer memory. Furthermore, the concepts of linked data structu	res and processing	user inputs
are developed. S	students master the practical implementation of simple individual tasks. The course emphasizes acquiring programming habits for cre	ating readable and	reusable
programs. At the sa	ime time, the effort is to build students an overview of the program operation, data model, memory access, and management. Therefore	e, the C programmir	ng language
	es a direct link between the program data structures and their representation in the computer memory. Students will get acquainted no		-
_	with debugging and profiling. Labs aim to acquire practical skills of implementing simple individual tasks, emphasizing functionality are		
-	dence is developed by a set of homework with the possibility of optional and bonus assignments. The final task is an integration of a		ng existing
	plementations. Evaluation of coding style motivated by writing legible, understandable, and maintainable codes is also a part of the s		
B4B01DMA	Discrete Mathematics	Z,ZK	5
	ents meet some important topics from the field of discrete mathematics. Namely, they will explore divisibility and calculations modulo n		
relations, mappir	ngs, cardinality of sets, induction, and recurrence equations. The second aim of this course is to teach students the language of math	ematics, both pass	sively and
	actively, and introduce them to mathematics as science.		
B4B01JAG	Languages, Automats and Gramatics	Z,ZK	6
Basic notions of the	e theory of finite automata and grammars: deterministic and non deterministic finite automata, languages accepted by finite automata, r	-	. Grammars
	and languages generated by grammars with emphasis to context free grammars. A very brief introduction of Turing machine		
B4B33ALG	Algorithms	Z,ZK	6
	algorithms development is constructed with minimum dependency to programming language; nevertheless the lectures and seminars		
types a data stru	ctures, basic algorithms, recursive functions, abstract data types, stack, queues, trees, searching, sorting, special application algoritl	nms, Dynamic prog	ramming.
	Students are able to design and construct non-trivial algorithms and to evaluate their effectivity.	,	
	Solving Problems and other Games	KZ	6
B4B33RPH	,		
The main motivat	ion is to let students to deal with real-world problems properly. When working on real problems the student shall learn how to decom		
The main motivated define interfaces,	ion is to let students to deal with real-world problems properly. When working on real problems the student shall learn how to decom how to test and validate individual steps and so on. Many problems will actually be beyond the first-year-student skills. And many pro	blem will not be so	lved in the
The main motivated define interfaces, optimal way. The	ion is to let students to deal with real-world problems properly. When working on real problems the student shall learn how to decom how to test and validate individual steps and so on. Many problems will actually be beyond the first-year-student skills. And many prounsolved parts should motivate the students to study difficult theoretical subjects. They should generate the important questions. Idea	oblem will not be so ally, at the end of th	lved in the ne subject,
The main motivated define interfaces, optimal way. The	ion is to let students to deal with real-world problems properly. When working on real problems the student shall learn how to decom how to test and validate individual steps and so on. Many problems will actually be beyond the first-year-student skills. And many pro	oblem will not be so ally, at the end of th	lved in the ne subject,

B4B35OSY	Operating Systems	Z,ZK	4
Lecture introduces	operation system's basic concepts and principles as processes, threads, communication and synchronization, virtual memory, driver	rs, file systems, ba	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.		
B4B36FUP	Functional Programming	Z,ZK	6
This course introdu	ces students into the techniques of functional programming, the advantages and disadvantages of this programming paradigm, and its	use in practice. Th	is approach
is declarative in the	esense that the programmer symbolically describes the problem to be solved, rather than specifying the exact sequence of operation	s required to solve	e it. It allows
focusing on the es	sence of the solved problem and implementing even more complex algorithms compactly. Functional programming has notable adva	ntages for parallel	ization and
	ion 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	-	
learning. This cour	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	eeper and broader	insight into
	the field of artificial intelligence. More information is available at https://prg.ai/minor.		
B4B36ONM	Object-oriented design and Modeling	Z,ZK	6
B4B36PDV	Parallel and Distributed Computing	Z,ZK	6
B4B36SIN	Software Engineering	Z,ZK	6
B4B38PSIA	Computer Networks	Z,ZK	5
B4B39IUR	User interfaces implementation	Z,ZK	6
Based on the user	nterface specification (created by design team), the student will be able to implement user interface and communicate efficiently with	other stakeholders	s taking part
	in the whole process of design, testing, and implementation of the user interface.		
B4BPROJ6	Unassisted project	Z	6
BBAP20	Bachelor thesis	Z	20
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 introdu	ctory course
contains funda	mentals of Safety Electrical Engineering. In this way the students receive qualification of instructed person that enables them to work	on electrical equi	pment.
BEZZ	Basic Health and Occupational Safety Regulations	Z	0
The guidelines were	e worked out based on The Training Scheme for Health and Occupational Safety designed for employees and students of the Czech T	Technical Universit	y 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	ealth and Occupati	onal Safety
	regulations forms an integral and permanent part of qualification requirements. This program is obligatory.		

For updated information see http://bilakniha.cvut.cz/en/FF.html Generated: day 2025-11-27, time 07:58.