Recomended pass through the study plan

Name of the pass: Specialization Human-Computer Interaction - Passage through study

Faculty/Institute/Others: Faculty of Electrical Engineering

Department:

Pass through the study plan: Open Informatics - Human-Computer Interaction

Branch of study guranteed by the department: Welcome page

Guarantor of the study branch:

Program of study: Open Informatics Type of study: Follow-up master full-time

Note on the pass:

Coding of roles of courses and groups of courses:

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

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

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

Number of semester: 1

Code	Name of the course / Name of the group of courses (in case of groups of courses the list of codes of their members) Tutors, authors and guarantors (gar.)	Completion	Credits	Scope	Semester	Role
BEZM	Safety in Electrical Engineering for a master's degree Vladimír K la, Radek Havlí ek, Ivana Nová, Josef ernohous, Pavel Mlejnek Radek Havlí ek Vladimír K la (Gar.)	Z	0	2BP+2BC	Z	Р
B4M33PAL	Advanced algorithms Ond ej Drbohlav, Daniel Pr ša Daniel Pr ša (Gar.)	Z,ZK	6	2P+2C	Z	Р
B4M39NUR	User Interface Design Zden k Míkovec Zden k Míkovec (Gar.)	Z,ZK	6	2P+2S	Z	PO
B4M39PUR1	Psychology in HCl Jakub Franc, Jan Balata Jakub Franc Jakub Franc (Gar.)	Z,ZK	6	2P+2S	Z	PO
2018_MOIVOL	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
B4M35KO	Combinatorial Optimization Zden k Hanzálek Zden k Hanzálek (Gar.)	Z,ZK	6	3P+2C	L	Р
B4M01TAL	Theory of Algorithms Marie Demlová, Natalie Žukovec Marie Demlová Marie Demlová (Gar.)	Z,ZK	6	3P+2S	L	Р
B4M39PTV	Spatial Design Marian Karel, Adéla Bébarová Zden k Míkovec Zden k Míkovec (Gar.)	Z,ZK	6	2P+2L	L	РО
B4M39VIZ	Visualization Ladislav molík Ladislav molík (Gar.)	Z,ZK	6	2P+2C	L	РО
2018_MOIVOL	Volitelné odborné p edm ty	Min. cours.	Min/Max 0/999			٧

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
B4MSVP	Software or Research Project Ivan Jelínek, Jaroslav Sloup, Ji í Šebek, Martin Šipoš, Drahomíra Hejtmanová, Jana Zichová, Petr Pošík, Martin Hlinovský, Katarína Žmolíková, Ivan Jelínek Ivan Jelínek (Gar.)	KZ	6		Z,L	Р
B4M36SAN	Statistical Data Analysis Ji í Kléma Ji í Kléma Ji í Kléma (Gar.)	Z,ZK	6	2P+2C	Z	РО

	Software Quality Assurance Karel Frajták, Miroslav Bureš, Mat j Klíma Miroslav Bureš Miroslav Bureš (Gar.)	Z,ZK	6	2P+2C	Z	PO	
2018_MOIVOL	Volitelné odborné p edm ty	Min. cours.	Min/Max 0/999			V	

Number of semester: 4

B4MSVP

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
BDIP25	Diploma Thesis	Z	25	22s	L	Р
2019 MOIVOI	V-P(-loss - dh-ours - o-dun to-	Min. cours.	Min/Max			
2018_MOIVOL	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
2018_MOIVOL		Min. cours.	Min/Max			.,
	Volitelné odborné p edm ty	0	0/999			V

List of courses of this pass:

Code	Name of the course	Completion	Credits
B4M01TAL	Theory of Algorithms	Z,ZK	6
The course brings	theoretical background of the theory of algorithms with the focus at first on the time and space complexity of algorithms and problems	s, secondly on the	correctness
of algorithms. Furt	her it is dealt with the theory of complexity; the classes P, NP, NP-complete, PSPACE and NPSPACE are treated and properties of th	em investigated. P	robabilistic
	algorithms are studied and the classes RP and ZZP introduced.		
B4M33PAL	Advanced algorithms	Z,ZK	6
Basic	graph algorithms and graph representation. Combinatorial algorithms. Application of formal languages theory in computer science - p	battern matching.	
B4M35KO	Combinatorial Optimization	Z,ZK	6
The goal is to show	the problems and algorithms of combinatorial optimization (often called discrete optimization; there is a strong overlap with the term of	perations research	n). Following
the courses on li	near algebra, graph theory, and basics of optimization, we show optimization techniques based on graphs, integer linear programmin	ig, heuristics, appr	oximation
algorithms and s	tate space search methods. We focus on application of optimization in stores, ground transportation, flight transportation, logistics, pl	anning of human r	esources,
	scheduling in production lines, message routing, scheduling in parallel computers.		
B4M36SAN	Statistical Data Analysis	Z,ZK	6
This course builds	on the skills developed in introductory statistics courses. It is practically oriented and gives an introduction to applied statistics. It mainly	, aims at multivaria	te statistica
analysis and mode	lling, i.e., the methods that help to understand, interpret, visualize and model potentially high-dimensional data. It can be seen as a p	urely statistical co	unterpart to
	machine learning and data mining courses.		
B4M36ZKS	Software Quality Assurance	Z,ZK	6
B4M39NUR	User Interface Design	Z,ZK	6
Students will get ac	quainted with the theory of human-computer communication and interaction (formal description of user interfaces, formal user models, t	he fundamentals of	perception
	cognition, and user information evaluation).		
B4M39PTV	Spatial Design	Z,ZK	6
Course aim is to ev	oke interest in shape, material and its spatial characteristic with help of sophisticated spatial tasks and studies. It is not intended to e	ducate a sculptor	or designer.
Another aspect is to	o turn students' attention from restricted form of flat computer screens towards free real space and let them by means of basic techniq	ues like drawing a	nd modeling
to create sponta	neously. Students will be confronted with basic composition and form creation principles of Gestalt psychology. Student will verify kno	wledge gained by	means of
	sophisticated composition tasks. This course will take place in the sculptural and design workshop of Faculty of Architecture	Э.	
B4M39PUR1	Psychology in HCI	Z,ZK	6
The aim of the c	ourse is that students will master all phases of the research process starting from initial planning up to the translation of their observa	ations into innovati	ve design
concepts, so they a	re able to run applied research projects themselves. Overall the emphasis is laid on practitioner's approach and developing skills neede	ed for adopting thes	e technique
	in daily design practice across various domains.		
B4M39VIZ	Visualization	Z,ZK	6
In this course, you	will get the knowledge of theoretical background for visualization and the application of visualization in real-world examples. The visualization will get the knowledge of theoretical background for visualization and the application of visualization in real-world examples. The visualization is a context of the context o	ualization methods	are aimed
at exploiting bot	h the full power of computer technologies and the characteristics (and limits) of human perception. Well-chosen visualization method	s can help to revea	al hidden
dependencies in	the data that are not evident at the first glance. This in turn enables a more precise analysis of the data, or provides a deeper insight	into the core of the	particular
	problem represented by the data.		

ΚZ

Software or Research Project

BDIP25	Diploma Thesis	Z	25					
Independent final	Independent final comprehensive work for the Master's degree study programme. A student will choose a topic from a range of topics related to his or her branch of study, which w							
be specified b	y branch department or branch departments. The diploma thesis will be defended in front of the board of examiners for the compreh	ensive final examir	nation.					
BEZM	Safety in Electrical Engineering for a master's degree	Z	0					
The course provides for students of all programs periodic training guidelines for health and occupational safety and gives knowledge of electrical hazard of given branch of study.								
	Students receive indispensable qualification according to the current Directive of the Dean.							

For updated information see http://bilakniha.cvut.cz/en/f3.html Generated: day 2025-11-10, time 05:36.