Recomended pass through the study plan

Name of the pass: Specialization Audiovisual Technology and Signal Processing - Passage through study

Faculty/Institute/Others: Faculty of Electrical Engineering

Department:

Pass through the study plan: Electronics and Communications - Audiovisual Technology and Signal Processing

Branch of study guranteed by the department: Welcome page

Guarantor of the study branch:

Program of study: Electronics and Communications

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
BE2M99ZVT	Audio Technology 1 Libor Husník, Ond ej Ji í ek, František Rund František Rund Libor Husník (Gar.)	Z,ZK	6	2P+2L	Z	Р
BE2M31DSPA	Digital Signal Processing Petr Pollák Petr Pollák Petr Pollák (Gar.)	Z,ZK	6	2P+2C	Z	Р
BE2M37OBT	Image Technology Lukáš Krauz, Petr Páta, Miloš Klíma, Karel Fliegel Karel Fliegel Petr Páta (Gar.)	Z,ZK	6	2P+2L	Z	Р
BE2M37MAM	Microprocessors Stanislav Vítek Stanislav Vítek (Gar.)	Z,ZK	6	2P+2L	Z	Р
BEEZM	Safety in Electrical Engineering for a master's degree Vladimír K la, Ivana Nová, Josef ernohous, Radek Havlí ek Radek Havlí ek Vladimír K la (Gar.)	Z	0	2BP+2BC	Z	Р
BE2M31SYN	Synthesis of Audio Signals Roman mejla Roman mejla (Gar.)	Z,ZK	6	2P+2C	Z	Р

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
BE2M37KASA	Compression of Images and Signals František Rund, Karel Fliegel, Stanislav Vítek, Václav Vencovský Karel Fliegel Stanislav Vítek (Gar.)	Z,ZK	6	2P+2C	L	Р
BE2M31ZRE	Speech Processing Petr Pollák Petr Pollák Petr Pollák (Gar.)	Z,ZK	6	2P+2C	L	Р
BE2M32BTSA	Wireless Technologies Zden k Be vá , Lukáš Vojt ch, Zbyn k Kocur, Pavel Mach Ján Ku erák Zden k Be vá (Gar.)	Z,ZK	6	2P + 2L	Z,L	Р
		Min. cours.				
2018_MEKEPV2	Compulsory subjects of the programme BE2M37MOTA,BE2M37ZV2A, (see the list of groups below)	5	Min/Max			D) (
		Max. cours.	30/30			PV
		5				

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
BE2MPROJ6	Project František Rund, Zden k Be vá, Jan Šístek, Pavel Máša, Ivan Pravda, Lubor Jirásek František Rund František Rund (Gar.)	Z	6	0p+6s		Р
2018_MEKEPV2	Compulsory subjects of the programme BE2M37MOTA,BE2M37ZV2A, (see the list of groups below)	Min. cours. 5 Max. cours. 5	Min/Max 30/30			PV
2018_MEKEVOL	Elective subjects	Min. cours.	Min/Max 0/999			٧

Number of semester: 4

Code

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 MEKEVOL	Floribus subjects	Min. cours.	Min/Max			
2018_MEKEVOL	Elective subjects	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 group (for specification	courses and on see here o	codes of members of this r below the list of courses)	Com	pletion	Credits	Scope	Semester	Role
					Min.	cours.				
2018 ME	KEPV2	Compulsor	ry subjects of the programme			5 Min/Max		x		PV
compared by caspette of the programme		Max	. cours.	30/30						
						5				
BE2M37MOTA	Advanced	areas in image and vide BE2M37ZV2A Audio Technology 2			BEAM31	BEAM31BSG Biological sign		nals		
BE2M37DTRA	Digital Aud	io and Video Broadcas BE2M37OBFA Image Photonics			BE0M37	FAV F	hysiology an	d modeling of	heari	
2019 MEKEVOL				Min.	cours.	Min/Ma	x		V	
2018_MEKEVOL		Elective subj	ects	o 0/999		V				

List of courses of this pass:

Completion Credits

Name of the course

BDIP25	Diploma Thesis	Z	25					
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 will								
be specified b	be specified by branch department or branch departments. The diploma thesis will be defended in front of the board of examiners for the comprehensive final examination.							
BE0M37FAV	Physiology and modeling of hearing and vision	Z,ZK	6					
The primary aim of	the course is to study the physiology of sensors and processes of perception of audio and visual information by human subjects as to	wo central and mo	st important					
communication cha	communication channels, i.e., Human Auditory System (HAS) and Human Visual System (HVS). The course summarizes current knowledge in the field of human vision and hearing							
physiology and, at	physiology and, at the same time, presents their description using mathematical models using the latest computational tools and procedures, including Machine Learning (ML), Deep							
Learning (DL) and	Artificial Intelligence (AI). Emphasis is also placed on current and prospective applications of the mentioned knowledge. The main app	lication area is the	audiovisual					
technology related	technology related to human perception, but the direct employment of the acquired knowledge also includes the areas of multimedia technology, control systems, automation, robotics,							
safety and securit	safety and security technology, bioinspired systems, etc. At the same time, students gain a general overview of information processing in biological systems. A separate part is the							
objectification of audiovisual information perceived quality, i.e., Quality of Experience (QoE). The course is intended for students of master's degree in technical fields. The exercises								
will be devoted to fundamental experiments to determine the most important characteristics of HAS and HVS, including computational models and simulation of vision and hearing								
processes.								
BE2M31DSPA	Digital Signal Processing	Z,ZK	6					
The subject gives	overview about basic methods of digital signal processing and their applications (examples from speech and biological signal process	sing): disrete-time	signals and					

he subject is devoted to basis of speech processing addressed to students of master program. Discussed speech technology is currently applied in many systems in different fields g, information (alloque systems, voice controlled devices, clication systems or transcription of sudio-videor eroordings, support for language teaching, etc.) Students will learn basic algorithms for speech analysis (spectral analysis. LPC, cepstral analysis, pitch, formants, etc.), principles of speech recognition (GMM-HMM, ANN-HMM systems, small and large vocabulary recognizers), speaker recognition (based on VO 4 and GMM), speech enhancement can be found at like heri-http://noel.feld.cvut.cz/vyube2m31zre</s>.: Pro zapsané studently jou detailni informace na vyukovém portalu <.a heri-https://noel.feld.cvut.cz/vyube2m31zre</s>.: Pro zapsané studently jou detailni informace na vyukovém portalu <.a heri-https://noel.feld.cvut.cz/syube2m31zre</s>.: Pro zapsané studently jou detailni informace na vyukovém portalu <.a heri-https://noel.feld.cvut.cz/syube2m31zre</s>.: Pro zapsané studently jou detailni informace na vyukovém portalu <.a heri-https://noel.feld.cvut.cz/syube2m31zre</s>.: Pro zapsané studently jou detailni informace na vyukovém portalu <.a heri-https://noel.feld.cvut.cz/syube2m31zre</s>.: Pro zapsané students will understand architecture, principles and reference of verifices and portale and por				
his course introduces the fundamentals of sound synthesis algorithms (everyday, music and speech), digital audio effects and sonification. Multimedia synthetic signals are used in modern digital systems, circular earliery systems, computer animations, gains and film. Understanding of theoretical concepts will be consolidated through practical programming assignments in Matlab. 8EZM31ZRE Speech processing addressed to students of master program. Discussed speech technology is currently applied in many systems in different fields a information disclade systems, voice controlled devices, dictation systems or transcription of audio-vice recordings, support for language leaching, etc.). Students is a system of transcription of audio-vice recordings, support for language leaching, etc.) Students will learn basic algorithms for speech analysis (spectral analysis). LPC, separatial analysis, pitch, formants, etc.), principles of speech recognition (Seade on VO and KolfM), speech synthesis or speech termocentric (SMM-HMM, ANN-HMM systems, small and large vocabularly recognizers), speaker recognition (Seade on VO and KolfM), speech synthesis or speech analysis (spectral analysis). LPC, separatial analysis, pitch, formants, etc.), principles of speech recognition (SMM-HMM, ANN-HMM systems, small and large vocabularly recognizers), speaker recognition (Seade on VO and KolfM), speech synthesis or speaker studently isou detailed information can be fund at 81 the helitopy of the special speakers of the propriets of the special speakers and speakers. Propriets of the special speakers and speakers and protection of vireits and sevents components. EZM37DRA	BE2M31SYN	Synthesis of Audio Signals	7 7K	6
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EZM3ZBTSA Wireless Technologies Z,ZK 6 he lectures give overview of fundamental principles of wireless networks in various areas of their application. Students will understand architecture, principles and protocols used in ferent wireless technologies and learn how these technologies can be exploited in real world applications. The goal is to teach students how to solve problems related to deployment of wireless networks components. EZM37DTRA Digital Audio and Video Broadcasting se subject makes students familiar with topics related to video and audio transmission. Described are methods of data stream creation, methods of source and channel coding, error irrection principles and modulation formats. Attention is paid to transmissions on serice the dare methods of data stream creation, methods of source and channel coding, error irrection principles and modulation formats. Attention is paid to transmission systems to transmission channel properties. The subject also deals with multimedial data services and with measurement in transmission systems. EZM37KASA Compression of Images and Signals Compression of Images and Signals EZM37WAMN Compression of Images and Signals Microprocessors Z,ZK 6 EZM37WAMN Microprocessors Z,ZK 6 Microprocessors with the students to make simple program in the assembly language, C language and combination of the memory or I/O space address extension. Next, taught the students to make simple program in the assembly language, C language and combination of whice				
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ne course is focused to the native and evoked biosignals used in clinical medicine and current methods of capturing, processing, recording and evaluating in the time and frequency			-	
domains. For important biological signals, the students are introduced with their genesis, and nature and physiological characteristics of the signals required for construction of struments. Students are introduced also with the physical and mathematical models. In laboratory exercises, students have the opportunity to capture their own biological signals and			-	
their subsequent processing in MATLAB.	monumento. Students		cii owii biologica	i signais and
BEEZM Safety in Electrical Engineering for a master's degree Z 0	REE7M		7	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.			_	1
Students receive indispensable qualification according to the current Directive of the Dean.	The source provide		or given braile	o. olday.
or undated information see http://bilakniha.cvut.cz/en/f3.html		, ,		

For updated information see http://bilakniha.cvut.cz/en/f3.html Generated: day 2025-07-02, time 02:05.