Study plan

Name of study plan: Electronics and Communications - Mobile Communications

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: Electronics and Communications

Type of study: Follow-up master full-time

Required credits: 109
Elective courses credits: 11
Sum of credits in the plan: 120

Note on the plan:

Name of the block: Compulsory courses in the program

Minimal number of credits of the block: 79

The role of the block: P

Code of the group: 2018_MEKDIP Name of the group: Diploma Thesis

Requirement credits in the group: In this group you have to gain 25 credits Requirement courses in the group: In this group you have to complete 1 course

Credits in the group: 25 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
BDIP25	Diploma Thesis	Z	25	22s	L	Р

Characteristics of the courses of this group of Study Plan: Code=2018_MEKDIP Name=Diploma Thesis

BDIP25	Diploma Thesis	Z	25
Independent final comp	rehensive 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 s	tudy, which will
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Code of the group: 2018_MEKP6

Name of the group: Compulsory subjects of the programme

Requirement credits in the group: In this group you have to gain 54 credits

Requirement courses in the group: In this group you have to complete 9 courses

Credits in the group: 54

Note on the group:

Specializace mobilní komunikace

Note on the gro	Jup. Openianzade mobili	ii komanikac	,			
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
B2M17ANT	Antennas Pavel Hazdra, Miloš Mazánek, Jan Kraček Jan Kraček Pavel Hazdra (Gar.)	Z,ZK	6	2P+2L	L	Р
B2M32BTSA	Wireless Technologies Zdeněk Bečvář, Lukáš Vojtěch, Zbyněk Kocur, Pavel Mach Ján Kučerák Zdeněk Bečvář (Gar.)	Z,ZK	6	2P + 2L	L	Р
B2M37DKM	Digital communications Jan Sýkora Jan Sýkora Jan Sýkora (Gar.)	Z,ZK	6	3P+1C	Z	Р
B2M37MAM	Microprocessors Petr Skalický, Stanislav Vítek Stanislav Vítek (Gar.)	Z,ZK	6	2P+2L	Z	Р
B2M32MKSA	Mobile Networks Zdeněk Bečvář, Pavel Mach, Robert Bešťák Pavel Mach Zdeněk Bečvář (Gar.)	Z,ZK	6	2P + 2L	Z	Р
B2M31DSP	Advanced DSP methods Pavel Sovka, Petr Pollák Pavel Sovka Pavel Sovka (Gar.)	Z,ZK	6	2P+2C	Z,L	Р

B2M32PST	Advanced Networking Technologies Zbyněk Kocur, Leoš Boháč Leoš Boháč (Gar.)	Z,ZK	6	2P + 2C + 4D	Z	Р	
B2MPROJ6	Project Jiří Jakovenko, Pavel Máša, Ivan Pravda, František Rund, Jan Šístek, Lubor Jirásek, Tomáš Zeman, Ladislav Oppl František Rund František Rund (Gar.)	Z	6	0p+6s	Z,L	Р	
B2M17SBS	Wave Propagation for Wireless Links Pavel Pechač Pavel Pechač (Gar)	Z,ZK	6	2P+2C	L	Р	

Characteristics of the courses of this group of Study Plan: Code=2018_MEKP6 Name=Compulsory subjects of the programme

B2M17ANT

Student will get strong knowledge about theory of electromagnetic field radiation and basic principles of antenna design. Methods of analysis are demonstrated on various types of antennas and their arrays. Seminars are both theoretical (analytical and numerical calculation using MATLAB and EM simulators CST) and practical (measurement of antenna

B2M32BTSA Wireless Technologies Z,ZK

The lectures give overview of fundamental principles of wireless networks in various areas of their application. Students will understand architecture, principles and protocols used in different 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, their operation or development of wireless networks components.

B2M37DKM Digital communications

The course provides fundamentals of digital communications theory; modulation, classical coding, channel models, and basic principles of decoding. The exposition is systematically built along the theoretical lines which allow to reveal all inner connections and principles. This allows students to develop the knowledge and use it in an active way in a design and construction of the communication systems. The course provides a necessary fundamental background for subsequent more advanced communications theory courses.

B2M37MAM Microprocessors Z.ZK

The aim is to make students acquainted with the properties of microprocessor systems, make students familiar with on-chip peripherals, connect external circuit to the processor bus, and with implementation 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 both. After completion of this subject student should be able to design and implement simpler microprocessor system including connection of necessary peripherals and software

B2M32MKSA Mobile Networks

The lectures introduce principles and functionalities of mobile networks with special focus on currently deployed technologies and future mobile networks. Furthermore, architecture and fundamental principles of GSM, UMTS, LTE/LTE-A, and 5G will be explained. Then, selected key technologies for future mobile networks (6G) will be explained.

B2M31DSP Advanced DSP methods

The course follows the basic course in signal processing and introduces advanced methods of analysis and digital signal processing. Graduates will learn the methods of digital signals analysis and be able to practically use them. They learn to know the conditions of use of correlation, spectral and coherent analysis of random signals. They will became familiar with methods of signal decomposition and independent component analysis and the time-frequency transformations. Emphasis will be placed on an ability to interpret the results of signal analyses

B2M32PST Advanced Networking Technologies

Subject Advanced Network Technologies expands students' knowledge of modern network technologies. The course is practically oriented and focused on explaining the function of advanced network protocols as used in modern data networks of today and tomorrow. Students will gain practical experience with the issues like Internet routing, software-defined networks, multicast routing, IPv6, and MPLS networks. Part of the course is also devoted to a detailed explanation of transport protocols TCP/UDP and a manner in which software applications can access transportation services of TCP/IP data networks.

B2MPROJ6 Project

6

Independent work in the form of a project. A student will choose a topic from a range of topics related to his or her branch of study, which will be specified by branch department or branch departments. The project will be defended within the framework of a subject. Project list http://www.fel.cvut.cz/en/education/semestral-projects.html

Wave Propagation for Wireless Links

The aim of the course is to study the wireless transmission channel in real environments focusing on wave propagation for planning of terrestrial and satellite wireless links. The syllabus includes both deeper theoretical foundations of radio wave propagation in the atmosphere as well as ITU-R design procedures for terrestrial and satellite, fixed and mobile communications in various frequency bands.

Name of the block: Compulsory elective courses

Minimal number of credits of the block: 30

The role of the block: PV

Code of the group: 2018 MEKPV6

Name of the group: Compulsory subjects of the programme

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 mobilní komunikace

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
B2M37ART	Architecture of radio receivers and transmitters Josef Dobeš, Pavel Kovář Karel Ulovec Pavel Kovář (Gar.)	Z,ZK	6	2P+2L	Z	PV
B2M32DMT	Diagnostics and Measurement in Telecommunications Zbyněk Kocur, Jiří Vodrážka Petr Jareš Jiří Vodrážka (Gar.)	Z,ZK	6	2P+2L	L	PV
B2M32DZSA	Digital Signal Processing in Telecommunication Petr Hampl	Z,ZK	6	2P + 2L	Z	PV
B2M32DSVA	Distributed Computing Peter Macejko Peter Macejko (Gar.)	Z,ZK	6	2P + 2C	Z	PV

B2M32IBEA	Information Security Tomáš Vaněk Petr Hampl Leoš Boháč (Gar.)	Z,ZK	6	2P + 2C	L	PV
B2M37KDKA	Coding in digital communications Jan Sýkora Jan Sýkora (Gar.)	Z,ZK	6	3P+1C	L	PV
B2M32PRSA	Access Networks Tomáš Zeman, Jiří Vodrážka, Pavel Lafata Petr Jareš Jiří Vodrážka (Gar.)	Z,ZK	6	2P + 2L	Z	PV
B2M32RTK	Telephony Communication Control Robert Bešťák, Pavel Troller Robert Bešťák Robert Bešťák (Gar.)	Z,ZK	6	2P + 2L	L	PV
B2M32THOA	Queueing Theory	Z,ZK	6	3P + 1L	Z	PV

Characteristics of the courses of this group of Study Plan: Code=2018 MEKPV6 Name=Compulsory subjects of the progra

Ondi deteriories or	the courses of this group of olday I lan. code=2010_inEtt. vo Name=00mpaisory subject	3 of the prog	lamin
B2M37ART	Architecture of radio receivers and transmitters	Z,ZK	6

The subject deals with the architecture of the radio receivers and transmitters and software radio. The student's familiarize with the design and the modern methods of optimization of the radio receivers and transmitters' functional blocks and with the phenomena related with frequency conversion, noise sources and noise analyses. They learn conceptual radio receiver and transmitter design, including the level and frequency plans and their optimization. The course also deals with the digital signal processing blocks of the modern radio receivers and their practical implementation.

B2M32DMT Diagnostics and Measurement in Telecommunications

Z,ZK

The subject builds on knowledge of basic types of interfaces used in telecommunications (from classic, via a packet-oriented and expected future generation system). Explains the importance of key parameters, presents tools for the monitoring and measurement methodology and fault diagnosis. Students verify acquired knowledge to practical tasks in the laboratory to real systems and advanced measurement techniques.

B2M32DZSA Digital Signal Processing in Telecommunication

Z,ZK

6

The goal of the subject is to make familiar with theory, methods and implementation of algorithms of the digital signal processing of one- and multi-dimensional signals related to the telecommunication technology.

B2M32DSVA **Distributed Computing**

The course is focused on technologies that support distributed computing: on mechanisms ensuring reliable, efficient and secure connection of application processes, programming interfaces of communication channels and up-to-date middleware technologies. A significant part of lectures is dedicated to distributed algorithms that assure causality, exclusive access, deadlock detection/avoidance, fault-tolerance, mobile computing, and security.

Information Security

The Information Security course provides a complete source of information on the field of security of information systems and information technologies. The most of information in today society is created, transferred, stored in electronic form so information security is very important part of it. Technical background for information security is provided by cryptology.

B2M37KDKA Coding in digital communications

This course extends and deepens the topics of the basic communication theory courses in the following main areas. 1) Advanced information theory in coding and Network Information Theory develop a framework for understanding the principles of the channel coding in single-user and multi-node/multi-user scenarios. 2) The algebraic coding presents classical topics of block and convolutional codes. 3) Advanced coding technique focuses on turbo, LDPC, Space-Time codes and Wireless Network Coding. 4) Advanced decoding technique, namely iterative and multi-user decoding is a fundamental tool for decoding capacity approaching channel codes.

Access Networks B2M32PRSA

Z.ZK

The course covers the area of high-speed transmission of information in the access network level, with emphasis on the use of optical transmission media and its combination with metallic lines (FTTx). In the practical part, students will learn the methods required for the design, modeling, measurement and analysis of transmission media, diagnostics of systems and whole access networks

B2M32RTK **Telephony Communication Control**

Z.ZK

The course is oriented to audio or video issues in telecommunication networks, both fixed and mobile. Students will learn principles of switching systems and their management as well as the course will provide them with an overview of signaling systems in central exchanges and networks. The focus is on digital switching systems as circuit as packet switch oriented, i.e. so-called next generation network (NGN) and voice communication in 4G networks. (VoLTE).

B2M32THOA Queueing Theory

Z,ZK

The aim of the course is to present an overview of dimensioning of telecommunication networks on the basis of results of the queuing theory (QT) and to introduce possibilities of simulation and modelling of networks, both from the point of view of grade of service (GoS) and quality of service (QoS). Results of the QT are applied on different service systems and telecommunication networks being currently operated and developed. Theoretical knowledge about models of service systems can be applied on dimensioning of different service systems in real life - not only on the telecommunications one.

Name of the block: Elective courses

Minimal number of credits of the block: 0

The role of the block: V

Code of the group: 2018 MEKH

Name of the group: Humanities subjects

Requirement credits in the group: Requirement courses in the group:

Credits in the group: 0

Note on the group:

Note on the give	oup.					
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
B0M16FIL	Peter Zamarovský Peter Zamarovský Peter Zamarovský (Gar.)	Z,ZK	5	2P+2S	Z,L	V
B0M16HVT	History of science and technology 2 Marcela Efmertová Marcela Efmertová (Gar.)	Z,ZK	5	2P+2S	Z,L	V
B0M16HSD1	History of economy and social studies Marcela Efmertová	Z,ZK	5	2P+2S	Z,L	٧

B0M16PSM	Psychology Jan Fiala Jan Fiala (Gar.)	Z,ZK	5	2P+2S	Z,L	V
B0M16TEO	Theology Vladimír Slámečka Vladimír Slámečka Vladimír Slámečka (Gar.)	Z,ZK	5	2P+2S	Z,L	V

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

B0M16FIL		Z,ZK	5
B0M16HVT	History of science and technology 2	Z,ZK	5

This subject traces historical developments in electrical engineering branches in the world and in the Czech Lands. Its ultimate goal is to stimulate students' interest in the history and traditions of the subject, while highlighting the developments in technical education and professional organizations, the process of shaping scientific life and the influence of technical engineers

B0M16HSD1 History of economy and social studies

This subject deals with the history of the Czech society in the 19th - 21th centuries. It follows the forming of the Czech political representation, its aims and achieved results as well as the social and cultural development and coexistence of the various ethnical groups in the Czech countries.

B0M16PSM	Psychology	Z,ZK	5
B0M16TEO	Theology	Z,ZK	5

This subject provides to students the basic orientation in christian theology and requires no special previous education. After short philosophic lecture the basic theologic disciplines are gone through. The subject is determined not only to believer students who want to know the reliable theologic grounding but also above all to ones who want to get know Christianity - religion from which graws our civilization up.

Code of the group: MTV

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
TV-V1	Physical education	Z	1	0+2	Z,L	V
TVV0	Physical education	Z	0	0+2	Z,L	V
TVKZV	Physical Education Course	Z	0	7dní	Z	V
TVKLV	Physical Education Course	Z	0	7dní	L	V

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

TVV	Physical education	Z	0	
TV-V1	Physical education	Z	1	
TVV0	Physical education	Z	0	
TVKZV	Physical Education Course	Z	0	
TVKLV	Physical Education Course	Z	0	

Code of the group: 2018_MEKVOL Name of the group: Elective subjects Requirement credits in the group: Requirement courses in the group:

Credits in the group: 0

~Nabídku volitelných předmětů uspořádaných podle kateder najdete na webových stránkách Note on the group:

http://www.fel.cvut.cz/cz/education/volitelne-predmety.html\\

List of courses of this pass:

Code	Name of the course	Completion	Credits
B0M16FIL		Z,ZK	5
B0M16HSD1	History of economy and social studies	Z,ZK	5
This subject deals with the history of the Czech excists in the 10th 21th continues It follows the forming of the Czech political representation, its sime and exhibited required			

the social and cultural development and coexistence of the various ethnical groups in the Czech countries.

B0M16HVT	History of science and technology 2	Z,ZK	5
	historical developments in electrical engineering branches in the world and in the Czech Lands. Its ultimate goal is to stimulate stude		
raditions of the sui	bject, while highlighting the developments in technical education and professional organizations, the process of shaping scientific life engineers	and the influence	or technical
B0M16PSM	Psychology	Z,ZK	5
B0M16TEO	Theology	Z,ZK	5
	the original previous education. After short philosophic lecture to students the basic orientation in christian theology and requires no special previous education. After short philosophic lecture to		_
	The subject is determined not only to believer students who want to know the reliable theologic grounding but also above all to ones who religion from which graws our civilization up.	=	-
B2M17ANT	Antennas	Z,ZK	6
_	trong knowledge about theory of electromagnetic field radiation and basic principles of antenna design. Methods of analysis are demo heir arrays. Seminars are both theoretical (analytical and numerical calculation using MATLAB and EM simulators CST) and practical parameters).		
B2M17SBS	Wave Propagation for Wireless Links	Z,ZK	6
The aim of the cour	rse is to study the wireless transmission channel in real environments focusing on wave propagation for planning of terrestrial and satell er theoretical foundations of radio wave propagation in the atmosphere as well as ITU-R design procedures for terrestrial and satellite, fixe in various frequency bands.	lite wireless links.	The syllabus
B2M31DSP	Advanced DSP methods	Z,ZK	6
The course follows	the basic course in signal processing and introduces advanced methods of analysis and digital signal processing. Graduates will learn	the methods of d	igital signals
=	ole to practically use them. They learn to know the conditions of use of correlation, spectral and coherent analysis of random signals. I	=	
methods of signal of	decomposition and independent component analysis and the time-frequency transformations. Emphasis will be placed on an ability to	interpret the resu	ults of signa
DOMOODTO A	analyses. Wireless Technologies	Z,ZK	6
B2M32BTSA	Wireless Technologies		6
•	schnologies and learn how these technologies can be exploited in real world applications. The goal is to teach students how to solve proof wireless networks, their operation or development of wireless networks components.		
B2M32DMT	Diagnostics and Measurement in Telecommunications	Z.ZK	6
	s on knowledge of basic types of interfaces used in telecommunications (from classic, via a packet-oriented and expected future gene	,	1
	ey parameters, presents tools for the monitoring and measurement methodology and fault diagnosis. Students verify acquired knowled laboratory to real systems and advanced measurement techniques.		-
B2M32DSVA		Z,ZK	6
	ised on technologies that support distributed computing: on mechanisms ensuring reliable, efficient and secure connection of applicat	,	_
interfaces of com	nmunication channels and up-to-date middleware technologies. A significant part of lectures is dedicated to distributed algorithms that	t assure causality,	exclusive
	access, deadlock detection/avoidance, fault-tolerance, mobile computing, and security.		
B2M32DZSA The goal of the sul	Digital Signal Processing in Telecommunication bject is to make familiar with theory, methods and implementation of algorithms of the digital signal processing of one- and multi-dime	Z,ZK ensional signals re	6 elated to the
B2M32IBEA	telecommunication technology. Information Security	Z,ZK	6
	INIOTHATION Security curity course provides a complete source of information on the field of security of information systems and information technologies. The		_
	d, transferred, stored in electronic form so information security is very important part of it. Technical background for information security		-
B2M32MKSA	Mobile Networks	Z,ZK	6
	duce principles and functionalities of mobile networks with special focus on currently deployed technologies and future mobile networl	ks. Furthermore, a	architecture
and funda	mental principles of GSM, UMTS, LTE/LTE-A, and 5G will be explained. Then, selected key technologies for future mobile networks (6	3G) will be explain	ned.
B2M32PRSA		Z,ZK	6
	s the area of high-speed transmission of information in the access network level, with emphasis on the use of optical transmission mex). In the practical part, students will learn the methods required for the design, modeling, measurement and analysis of transmission in the practical part, students will learn the methods required for the design, modeling, measurement and analysis of transmission in the practical part, students will learn the methods required for the design, modeling, measurement and analysis of transmission in the practical part, students will learn the methods required for the design, modeling, measurement and analysis of transmission in the practical part, students will be a supplication of the practical part and part a		
B2M32PST	and whole access networks. Advanced Networking Technologies	Z,ZK	6
	Advanced Networking Technologies Network Technologies expands students' knowledge of modern network technologies. The course is practically oriented and focused		_
-	k protocols as used in modern data networks of today and tomorrow. Students will gain practical experience with the issues like Interr	• •	
	st routing, IPv6, and MPLS networks. Part of the course is also devoted to a detailed explanation of transport protocols TCP/UDP and	=	
	applications can access transportation services of TCP/IP data networks.		
B2M32RTK	Telephony Communication Control	Z,ZK	6
	sted to audio or video issues in telecommunication networks, both fixed and mobile. Students will learn principles of switching systems are provide them with an overview of signaling systems in central exchanges and networks. The focus is on digital switching systems as circular to the systems are considered and provide them with an overview of signaling systems in central exchanges and networks. The focus is on digital switching systems as circular to the systems are circular to the systems.	_	
DOMOCT! IO *	i.e. so-called next generation network (NGN) and voice communication in 4G networks. (VoLTE).	7 71/	
B2M32THOA	Queueing Theory urse is to present an overview of dimensioning of telecommunication networks on the basis of results of the queuing theory (QT) and	Z,ZK	6
THE AITH OF THE CO	purse is to present an overview of dimensioning of telecommunication networks on the basis of results of the queuing theory (QT) and published by the point of view of grade of service (GoS) and quality of service (QoS). Results of the QT are applied	•	
simulation and mo	ation networks being currently operated and developed. Theoretical knowledge about models of service systems can be applied on din systems in real life - not only on the telecommunications one.		=
	,	Z,ZK	6
and telecommunica	Architecture of radio receivers and transmitters	_,	1
and telecommunica	Architecture of radio receivers and transmitters with the architecture of the radio receivers and transmitters and software radio. The student s familiarize with the design and the mode	ern methods of op	
B2M37ART The subject deals we the radio received	with the architecture of the radio receivers and transmitters and software radio. The student s familiarize with the design and the mode rs and transmitters' functional blocks and with the phenomena related with frequency conversion, noise sources and noise analyses. Ismitter design, including the level and frequency plans and their optimization. The course also deals with the digital signal processing	They learn conce	
B2M37ART The subject deals we the radio receiver and trans	with the architecture of the radio receivers and transmitters and software radio. The student s familiarize with the design and the mode rs and transmitters' functional blocks and with the phenomena related with frequency conversion, noise sources and noise analyses. Ismitter design, including the level and frequency plans and their optimization. The course also deals with the digital signal processing receivers and their practical implementation.	They learn concept blocks of the mo	dern radio
B2M37ART The subject deals was the radio receiver receiver and tran	with the architecture of the radio receivers and transmitters and software radio. The student s familiarize with the design and the moders and transmitters' functional blocks and with the phenomena related with frequency conversion, noise sources and noise analyses. Is smitter design, including the level and frequency plans and their optimization. The course also deals with the digital signal processing receivers and their practical implementation. Digital communications	They learn concept blocks of the mod	dern radio
B2M37ART The subject deals was the radio receiver receiver and tran B2M37DKM The course provide	with the architecture of the radio receivers and transmitters and software radio. The student s familiarize with the design and the moders and transmitters' functional blocks and with the phenomena related with frequency conversion, noise sources and noise analyses. Is smitter design, including the level and frequency plans and their optimization. The course also deals with the digital signal processing receivers and their practical implementation. Digital communications es fundamentals of digital communications theory: modulation, classical coding, channel models, and basic principles of decoding. The	They learn concept blocks of the mo	dern radio 6 stematically
B2M37ART The subject deals was the radio receiver receiver and tran B2M37DKM The course provide built along the the	with the architecture of the radio receivers and transmitters and software radio. The student s familiarize with the design and the moders and transmitters' functional blocks and with the phenomena related with frequency conversion, noise sources and noise analyses. Is smitter design, including the level and frequency plans and their optimization. The course also deals with the digital signal processing receivers and their practical implementation. Digital communications	They learn concept blocks of the modern Z,ZK ne exposition is sy a ctive way in a	dern radio 6 stematically design and

B2M37KDKA	Coding in digital communications	Z,ZK	6	
This course extends and deepens the topics of the basic communication theory courses in the following main areas. 1) Advanced information theory in coding and Network Information				
Theory develop a fr	Theory develop a framework for understanding the principles of the channel coding in single-user and multi-node/multi-user scenarios. 2) The algebraic coding presents classical topics			
of block and convol	utional codes. 3) Advanced coding technique focuses on turbo, LDPC, Space-Time codes and Wireless Network Coding. 4) Advance	d decoding technic	que, namely	
	iterative and multi-user decoding is a fundamental tool for decoding capacity approaching channel codes.			
B2M37MAM	Microprocessors	Z,ZK	6	
The aim is to make	The aim is to make students acquainted with the properties of microprocessor systems, make students familiar with on-chip peripherals, connect external circuit to the processor bus,			
and with implement	and with implementation 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			
both. After compl	etion of this subject student should be able to design and implement simpler microprocessor system including connection of necessa	ary peripherals and	d software	
	design.			
B2MPROJ6	Project	Z	6	
Independent work in the form of a project. A student will choose a topic from a range of topics related to his or her branch of study, which will be specified by branch department or				
branch departments. The project will be defended within the framework of a subject. Project list http://www.fel.cvut.cz/en/education/semestral-projects.html				
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 by branch department or branch departments. The diploma thesis will be defended in front of the board of examiners for the comprehensive final examination.				
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 http://bilakniha.cvut.cz/en/f3.html Generated: day 2025-11-29, time 01:52.