Study plan

Name of study plan: Open Electronic Systems

Faculty/Institute/Others: Department: Branch of study guaranteed by the department: Welcome page Garantor of the study branch: Program of study: Welcome page Type of study: unknown full-time Required credits: 173 Elective courses credits: 7 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: 82 The role of the block: P

Code of the group: BOESEBAP Name of the group: Bachelor Thesis Requirement credits in the group: In this group you have to gain at least 9 credits (at most 144) Requirement courses in the group: In this group you have to complete at least 1 course Credits in the group: 9 Note on the group:

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
AE8B16BAP	Bachelor project	Z	9	7s	Z,L	Р
AE8B14BAP	Bachelor Project	Z	9	7s	L	Р
AE8B13BAP	Bachelor Project	Z	9	7S	L	Р
AE8B33BAP	Bachelor Project	Z	9	7S	L	Р
AE8B39BAP	Bachelor Project	Z	9	7S	L	Р
AE8B17BAP	Bachelor Project	Z	9	7s	L	Р
AE8B31BAP	Bachelor Project	Z	9	7ZP	L	Р
AE8B34BAP	Bachelor Project	Z	9	7C	L	Р
AE8B35BAP	Bachelor Project	Z	9	7S	L	Р
AE8B36BAP	Bachelor Project	Z	9	7s	L	Р
AE8B37BAP	Bachelor Project	Z	9	7s	L	Р
AE8B38BAP	Bachelor Project	Z	9	0P+7C	L	Р
AE8B15BAP	Bachelor's thesis	Z	9	7s	L	Р
ABAP9	Bachelor thesis	Z	9	28s	L	Р

Characteristics of the courses of this group of Study Plan: Code=BOESEBAP Name=Bachelor Thesis

AE8B16BAP	Bachelor project	Z	9		
AE8B14BAP	Bachelor Project	Z	9		
AE8B13BAP	Bachelor Project	Z	9		
Independent final project	t for the Bachelor's degree study program. A student will choose a topic from a range of topics related to his or her branch o	f study, which will	be specified by		
branch department or branch departments. The Bachelor's project will be defended in front of the board of examiners for the comprehensive final examination.					
AE8B33BAP	Bachelor Project	Z	9		
AE8B39BAP	Bachelor Project	Z	9		
AE8B17BAP	Bachelor Project	Z	9		
Independent final project for the Bachelor'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 Bachelor's project will be defended in front of the board of examiners for the comprehensive final examination. Bachelor, s projects					
are oriented into microwave technique, antennas, propagation, optoelectronics, EMC, medical applications.					

AE8B31BAP	Bachelor Project	Z	9			
The subject Bachelor Project is an independent final project for the Bachelor's degree study programme. A student will choose a topic from a range of topics related to his or her field						
of study, which will be s	pecified by branch department or branch departments. The Bachelor's project will be defended in front of the board of exami	ners for the comp	rehensive final			
examination.						
AE8B34BAP	Bachelor Project	Z	9			
Independent final project	t for the Bachelor's degree study programme. A student will choose a topic from a range of topics related to his or her branc	h of study, which	will be specified			
by branch department of	or branch departments. The Bachelor's project will be defended in front of the board of examiners for the comprehensive final	examination.				
AE8B35BAP	Bachelor Project	Z	9			
AE8B36BAP	Bachelor Project	Z	9			
AE8B37BAP	Bachelor Project	Z	9			
Independent final project	t for the Bachelor's degree study programme. A student will choose a topic from a range of topics related to his or her branc	h of study, which	will be specified			
by branch department of	or branch departments. The Bachelor's project will be defended in front of the board of examiners for the comprehensive final	examination.				
AE8B38BAP	Bachelor Project	Z	9			
AE8B15BAP	Bachelor's thesis	Z	9			
ABAP9	Bachelor thesis	Z	9			

Code of the group: BOESEP

Name of the group: Compulsory subjects of the programme

Requirement credits in the group: In this group you have to gain 73 credits

Requirement courses in the group: In this group you have to complete at least 12 courses

Credits in the group: 73

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
AE8B14ADP	Algorithm Development and Programming	Z,ZK	5	2+2c	Z	Р
AE8B01OGT	Optimization and Game Theory	Z,ZK	4	3+1s	L	Р

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

AE8B14ADP	Algorithm Development and Programming	Z,ZK	5			
Course objective: Introduction to algorithm design of basic and more advanced computer tasks, Digital computer structure, Introduction to the C programming language, Syntax and						
semantics. Basic skills	of procedural programming paradigm, variable, data type, declaration, operators, expressions, statements, functions, parame	eter passing, array	s, pointers,			
structures, compilation and debugging methods, preprocessor, conditional compilation, standard libraries, specific of embedded computer systems programming and debugging.						
AE8B01OGT	Optimization and Game Theory	Z,ZK	4			

Code of the group: BOESEBBE

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
BEEZZ	Basic health and occupational safety regulations Radek Havlí ek, Vladimír K la, Ivana Nová Radek Havlí ek Vladimír K la (Gar.)	Z	0	2BP+2BC	z	Р
BEEZB	Safety in Electrical Engineering for a bachelor's degree Radek Havlí ek, Vladimír K la, Ivana Nová Radek Havlí ek Vladimír K la (Gar.)	Z	0	2BP+2BC	Z,L	Р

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

BEEZZ	Basic health and occupational safety regulations	Z	0			
The guidelines were worked out based on The Training Scheme for Health and Occupational Safety designed for employees and students of the Czech Technical University in Prague,						
which was provided by	which was provided by the Rector's Office of the CTU. Safety is considered one of the basic duties of all employees and students. The knowledge of Health and Occupational Safety					
regulations forms an int	egral and permanent part of qualification requirements. This program is obligatory.					
BEEZB	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 of it. This introductory course						
contains fundamentals of Safety Electrical Engineering. In this way the students receive qualification of instructed person that enables them to work on electrical equipment.						

Name of the block: Compulsory courses of the specialization Minimal number of credits of the block: 91 The role of the block: PO

Code of the group: BOESEPO

Name of the group: Compulsory subjects of the branch

Requirement credits in the group: In this group you have to gain 91 credits

Requirement courses in the group: In this group you have to complete at least 18 courses

Credits in the group: 91

Note on the grou	up:					
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
AE8B31AAC	Analog and Acitye Circuits	Z.ZK	6	3P+2S	Z	PO
AF8B31CIR	Circuit Theory	7.7K	8	4P+2S	1	PO
AE8B32DNT	Data Natworks Theory	7.7K	5	3P + 11	7	PO
AE8B37DCM	Data Networks Theory	7.7%	5		7	
			5		2	F0
AE8B37DIT	Digital Design	Z,ZK	5	2P+20	L	PO
AE8B32DSP	Digital Signal Processing	Z,ZK	5	3P + 1L	Ζ	PO
AE8B32DCL	Digital Signal Processing and Communication Laboratory	Z	2	0P + 2C	Z	PO
AE8B17ELD	Electrodynamics	Z,ZK	5	3P+1S	L	PO
AE8B17EMT	Electromagnetic Field Theory	Z,ZK	8	4P+2S	Z	PO
AE8B34EOD	Electronic and Optoelectronic Devices	Z,ZK	6	3P+2L	Z	PO
AE8B38EME	Electronic Measurements	KZ	4	2P+1L	L	PO
AE8B31ELE	Elements of Electronics	KZ	4	2P	L	PO
AE8B35FCS	Feed-Back Control Systems	Z,ZK	6	4P+2L	L	PO
AE8B32IES	Introduction to Electronic Systems	Z	2	0P + 2L	Z	PO
AE8B37SAS	Signals and Systems	Z,ZK	8	4P+2C	L	PO
AE8B34SST	Solid State Physics	Z,ZK	4	3P+1L	L	PO
AE8B37SSP	Statistical Signal Processing	Z,ZK	6	4P+0C	L	PO
Characteristics of th	ne courses of this group of Study Plan: Code=BOESEPO Name=	-Compulsory	subjects	s of the b	oranch	6
The subject AE8B31AAC is	s oriented on presentation, matematical description, analysis and sythesis of basic ana	logue active circui	ts and funct	ion blocks o	f electronic sys	stems based
AF8B31CIR C	Circuit Theory				7.7K	8
The subject AE8B31CIR is	a complet systematic presentation of electrical circuit theory. It is based on general physical	sical nature of elec	tromagnetic	effects, an	electric circuit	is presented
as a special quasistationar	y case of electromagnetic field. It defines basic circuit quantities (voltage, current) and b	asic circuit elemer	nts modeling	all kinds of	actual energy	interactions.
I he subject is specifically of working in steady and trans	oriented on linear electrical circuit (analogue L1I systems), it presents basic priciples ar sient states (modes), respectively. The time domain and frequency domain analysis is s	theorems of circ	d "System?	nd analysis	methods of lin	ear circuits
transfer properties analysis	s, stability analysis, and feedback theory. At the end the subject deals with basis of disc	rete LTI systems ti	neory.	onaraotonz		
AE8B32DNT D	ata Networks Theory			2	Z,ZK	5
AE8B37DCM D	igital Communications			Z	Z,ZK	5
The course provides funda	mentals of digital communications theory: modulation, classical coding, channel model	s, and basic princi	ples of deco	ding. The e	xposition is sys	stematically
construction of the commu	nes which allow to reveal all inner connections and principles. This allows students to d nication systems. The course provides a necessary fundamental background for subse-	evelop the knowle quent more advan	ced commu	e it in an ac nications th	live way in a de	esign and
AE8B37DIT D	igital Design			2	Z.ZK	5
The goal of this course is to	o introduce the philosophy of digital circuits' design, to provide formal description of com	binational and sec	uential logic	cal circuits, t	heir functional	blocks. Both
mathematical and functional description, as well as minimization algorithms for output and transient functions of digital components and circuits is presented. Karnaugh maps, latch						
elements, finite-state Meal	y and Moore machines are the essential part of the content. The subject matter discuss	ed will be tested o	on the typica	I design of	digital circuits.	
This subject is focused up	ngnai Signai Processing on basics in the digital signal processing, systems and methods for digital signal proces	sina.		2	<u>,</u> ,2n	Э
AE8B32DCL D	igital Signal Processing and Communication Laboratory				Z	2
This is a shared practical laboratory jointly practicing theoretical foundations gained in Digital Signal Processing (B-DSP), Digital Communications (B-DCM) and Data Network Theory						
(B-DNT) courses. It demonstrates how these areas together allow designing a complex functional system. During the course, students will design a set of building blocks based on						
individual pieces of knowledge from the all above stated courses allowing at the end to build complex demonstration signal processing and communication systems. The laboratory						
SW tools can be used in designing the system.						
AE8B17ELD E	lectrodynamics			2	Z,ZK	5
The course AEB17ELD (el	ectrodynamics) is a follow up of the course AEB17EMTA (Electromagnetic field theory).	The course starts	with a deco	mposition o	of electromagne	etic field into

planewaves, introduces radiation of waves and guides student through the interaction of electromagnetic waves with material boundaries. The theory of wave guides and transmission lines is also shown. The course ends with wave scattering. The knowledge gained in this course is needed for number of specialized master courses.

 AE8B17EMT
 Electromagnetic Field Theory
 Z,ZK
 8

Students get acquainted with physics fundaments of the electromagnetic theory and with its mathematical description. Particularly, the course guides student through electrostatics, magnetostatics, introduces coupling between time varying fields and it is ends with an introduction to an electromagnetic wave. The knowledge gained in this course are needed for the subsequent course AE8B17ELD (Electrodynamics), for the course of circuit theory, theory of semiconductors and a number of specialized master courses.

AE8B34EOD Electronic and Optoelectronic Devices	Z,ZK	6
This course introduces the basic theory, principles of operation and properties of electronic and optoelectronic devices. Physical principles of o	peration, device structu	ures and
characteristics are explained together with adequate models for small- and large-signal. Basic applications in analogue and digital electronics a	are examined. In semination	ars and labs,
students are introduced to basic principles of device simulation, measurement of device characteristics and extraction of device parameters. Op	eration of electron devi	ices in electronic
systems is then analyzed using the PSpice simulator.		
AE8B38EME Electronic Measurements	KZ	4
The course is focused to metrology fundamentals and uncertainty apparatus. It explains both elementary principles and selected advanced methods	used in electronics, tele	communications
and radio communications.		
AE8B31ELE Elements of Electronics	KZ	4
The subject AE8B31ELE (B-ELE) is a free continuation of the subject AE8B32IES (B-IES), now with technical contents yet, that provides elem	entary basis of electrica	al and electronic
engineering, describes and explains common contexts among electrical phenomena, that are important for subsequent specialized subjects (for ins	tance AE8B31CIR (B-C	JR), AE8B31DIT
(B-DIT), AE8B31EMT (B-EMT), AE8B31SAS (B-SAS).). The subject education uses relatively simple, elementary mathematical and physical n	nethods adequate to the	e 2nd semester
of the bachelor study stage. The subject provides basis of: - electromagnetic field and electrical circuit theory - semiconductor components the	ory - signal and system	theory - digital
and microprocessor technique.		
AE8B35FCS Feed-Back Control Systems	Z,ZK	6
Foundation course of automatic control. Introduction to basic concepts and properties of dynamic systems of physical, engineering, biological,	economics, robotics an	id informatics
nature. Basic principles of feedback and its use as a tool for altering the behavior of systems and managing uncertainty. Classical and modern	methods for analysis a	nd design of
automatic control systems. Students specialized in systems and control will build on these ideas and knowledge in the advanced courses to fol	low. Students of other b	pranches and
programs will find out that control is a inspiring, ubiquitous and entertaining field worth or a future cooperation.		
AE8B32IES Introduction to Electronic Systems		2
This is a motivation subject with syllabus composed of a set of demonstrations and measurements. Its content is divided into several themes.	itudents have a choice	from this offer
based on their pre-knowledge. I ne goal is to complete the missing knowledge and skills which may vary in students comming from various scr	ools. The next goal is to	o get an idea
about the scope of the OES programme.		
AE8B3/SAS Signals and Systems	Z,ZK	8
Continuous and discrete time signal representation in time and trequency domain. stochastic signals and their parameters. Elementary principle	s of analog modulations	s with their noise
conditions. Fundamental course for further study rocusing on communication, measurement and signal processing.		
AE8B34SSI Solid State Physics	Z,ZK	
The subject is almed on solid state physics including some parts of statistical physics. The subject informs about basic properties of materials used in	electronics, esp. about	semiconductors.
AE8B37SSP Statistical Signal Processing	Z,ZK	6
The course provides fundamentals in three main domains of the statistical signal processing: 1) estimation theory, 2) detection theory, 3) optim	al and adaptive filtering	J. The statistical
signal processing is a core theory with many applications ranging from digital communications, audio and video processing, radar and radio na	vigation, measurement	and experiment
evaluation, etc.		
Name of the block: Elective courses		
Minimal number of credits of the block: 0		
The role of the block: V		
Code of the group: BE IK		
Name of the group: 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
A0B04GA	Petra Juna Jennings Petra Juna Jennings (Gar.)	Z	2	2C	Z,L	V
A0B04KA	English Conversation 2 Petra Juna Jennings Petra Juna Jennings (Gar.)	Z	2	2C	Z,L	V
A0B04OA	Technical English Course Petra Juna Jennings Petra Juna Jennings (Gar.)	Z	2	2C	Z,L	V
A0B04C2Z	Czech language 2 Jitka Pinková Petra Juna Jennings (Gar.)	Z	2	2C	Z	V
A0B04C2L	Czech language 2 Jitka Pinková Petra Juna Jennings (Gar.)	Z	2	2C	L	V
A0B04CIN	Petra Juna Jennings Petra Juna Jennings (Gar.)	Z	2	2C	*	V
A0B04KF1	French conversation 1 Petra Juna Jennings Petra Juna Jennings (Gar.)	Z	2	2C	*	V
A0B04KF2	French conversation 1 Petra Juna Jennings Petra Juna Jennings (Gar.)	Z	2	2C	*	V
A0B04F1	French language 1 Petra Juna Jennings Petra Juna Jennings (Gar.)	Z	2	2C	*	V
A0B04F2	French language 2 Petra Juna Jennings Petra Juna Jennings (Gar.)	Z	2	2C	*	V
A0B04F3	French Language 3 Petra Juna Jennings Petra Juna Jennings (Gar.)	Z	2	2C	*	V
A0B04JAP	Japanese Petra Juna Jennings Petra Juna Jennings (Gar.)	Z	2	2C	*	V

A0B04GN	German Grammar Petra Juna Jennings Petra Juna Jennings (Gar.)	Z	2	2C	Z,L	V
A0B04KN	German Conversation Petra Juna Jennings Petra Juna Jennings (Gar)	Z	2	2C	Z,L	V
A0B04N1	Germa language 1	Z	2	2C	*	V
A0B04N2	German language 2 Petra luna lennings Petra luna lennings (Gar.)	Z	2	2C	*	V
A0B04N3	Germa language 3	Z	2	2C	*	V
A0B04ON	Professional German Professional German	Z	2	2C	Z,L	V
A0B04CAE1	Certificate of Advanced English Cert	Z	2	2C	Z,L	V
A0B04CAE2	Certificate of Advanced English Car)	Z	2	2C	Z,L	V
A0B04CAE3	Certificate of Advanced English CAE 3 Petra Juna Jennings, Pavla Péterová Petra Juna Jennings Petra Juna Jennings (Gar.)	Z	2	2C	Z,L	v
A0B04FCE1	FCE 1 Petra Juna Jennings	Z	2	2C	*	v
A0B04FCE2	FCE 2 Petra Juna Jennings	Z	2	2C	*	v
A0B04FCE4	FCE4	Z	2	2C	Z,L	V
A0B04FCE3	FCE 3 Petra Juna Jennings	Z	2	2C	Z,L	v
A0B04PZP	Preparation for stay in Germany Petra Juna Jennings Petra Juna Jennings (Gar.)	Z	2	2C	*	V
A0B04RET	Rhetoric Jitka Pinková Petra Juna Jennings (Gar.)	Z	2	2C	Z,L	V
A0B04KR	Russian conversation	Z	2	2C	Z,L	V
A0B04KR2	Russian conversation 2	Z	2	2C	*	V
A0B04R1	Russian language 1 Jitka Pinkova Petra Juna Jennings (Gar.)	Z	2	2C	*	V
A0B04R2	Russian language 2 Jitka Pinková Petra Juna Jennings (Gar.)	Z	2	2C	*	V
A0B04R3	Russian language 3 Jitka Pinková	Z	2	2C	*	V
A0B04R4	Russian language 3	Z	2	2C	*	V
A0B04KS1	Spanish conversation 1 Petra Juna Jennings Petra Juna Jennings (Gar.)	Z	2	2C	*	v
A0B04KS2	Spanish conversation 2 Petra Juna Jennings Petra Juna Jennings (Gar.)	Z	2	2C	*	V
A0B04S1	Spanish language 1 Petra Juna Jennings Petra Juna Jennings (Gar.)	Z	2	2C	*	v
A0B04S2	Spanish language 2 Petra Juna Jennings Petra Juna Jennings (Gar.)	Z	2	2C	*	V
A0B04S3	Spanish language 3 Petra Juna Jennings Petra Juna Jennings (Gar.)	Z	2	2C	*	V
A0B04S4	Spanish Language 4 Petra Juna Jennings Petra Juna Jennings (Gar.)	Z	2	2C	*	V
A0B04CA	Technical English for Pre-Intermediate	Z	2	2C	L	V
Characteristics of t	he courses of this group of Study Plan: Code-RE IK Name-I and		e			
A0B04GA		Judge seules	5		Z	2
The aim of this course is	to extend and complement grammatical patterns covered in other English courses that a	re intended for full	-time studer	nts. The cou	rse is mear	nt mainly as a
supplement for students	who have not yet passed the B2 examination and are interested in further study and addi	itional practice.				
A0B04KA	English Conversation 2				Z	2
The course is designed for	or students who want to develop their communication skills. Students will be given the op	portunity to use th	e vocabulary	y they alrea	dy know, as	s well as learn
new words and phrases, to communicate on a variety of topics and themes. This course is not designed for beginners.						
A0B04OA	Technical English Course				Z	2
This course is designed for	or students who have successfully passed the B2 Exam or have met the exam requirement	nt. Its main objectiv	e is to prepa	re students	to be able t	o communicate
about technical subject matter in English in a variety of formats. This will be practiced by examining the structure and style of writing in formal English and practicing via 3 different types						
of texts: an abstract, a short explanatory article, and a research article.						
A0B04C2Z	Czech language 2	to most the	o of took -:		Z	2
	A0B04C2I					2
The course is aimed at foreign students studying in Czech, it further develops their language knowledge and skills to meet the needs of technical university students.						۷
A0B04CIN Z 2						2
A0B04KF1	French conversation 1				Z	2
A0B04KF2	French conversation 1				7	2
A0B04F1	French language 1				7	2
A0B04F2	French language 2				7	2
				1	<u> </u>	<u> </u>

A0B04F3	French Language 3	Z	2
A0B04JAP	Japanese	7	2
A0B04GN	German Grammar	7	2
	German Conversation	7	2
	Cormon longuage 1	7	2
		Z 7	2
	German language 2	<u> </u>	2
A0B04N3	German language 3		2
A0B04ON	Professional German	Z	2
A0B04CAE1	Certificate of Advanced English CAE 1	Z	2
The aim of the course is	to prepare for Certificate of Advanced English - the second highest level Cambridge ESOL exam. The course CAE1 covers	units 1-4. Studyin	g for CAE helps
you to improve your lang	juage skills (reading, writing, English in use, listening and speaking) and use them in a wide range of contexts. The exam is bas guege is practical situations. You will be able to participate is mactings and discussions, expression episions dearly and be	sed on realistic tas	ks and indicates
texts of various types C	A E is recognised by the majority of universities in English speaking countries as proof of adequate language skills for course	able to understand	
as well as by employers	who require knowledge of a foreign language. CAE is taken by more than 60 000 people each year in more than 60 countries	s It is possible bu	it not necessary
for obtaining credit to tal	ke CAE at British Council.		
A0B04CAE2	Certificate of Advanced English CAE 2	7	2
The aim of the course is	to prepare for Certificate of Advanced English - the second highest level Cambridge ESOL exam. The course CAE2 covers	units 5-8. Studyin	g for CAE helps
you to improve your lang	juage skills (reading, writing, English in use, listening and speaking) and use them in a wide range of contexts. The exam is bas	sed on realistic tas	ks and indicates
the ability to use the lan	guage in practical situations. You will be able to participate in meetings and discussions, expressing opinions clearly and be	able to understand	d and produce
texts of various types. C	AE is recognised by the majority of universities in English speaking countries as proof of adequate language skills for course	es taught and asse	essed in English
as well as by employers	who require knowledge of a foreign language. CAE is taken by more than 60 000 people each year in more than 60 countries	es. It is possible bu	t not necessary
for obtaining credit to ta	ke CAE at British Council. Student is allowed to enrol only into one CAE course during one semester.		
A0B04CAE3	Certificate of Advanced English CAE 3	Z	2
The aim of the course is	to prepare for Certificate of Advanced English - the second highest level Cambridge ESOL exam. The course CAE3 covers it	unit 9 - 12. Studyir	g for CAE helps
you to improve your lane	guage skills (reading, writing English in use, listening and speaking) and use them in a wide range of contexts.		
A0B04FCE1	FCE 1	Z	2
The course is aimed for	students, employees of the Faculty and the public whose knowledge of English corresponds to B1 level according to the Eur	opean Language	Frame. The
course focuses on impro	oving all language skills - writing, speaking, reading, listening, grammar and phonetics - and is submitted to the goal of obtain	ning the required a	skills needed for
B2 ELF.			-
A0B04FCE2			2
The course is aimed for	students, employees of the Faculty and the public whose knowledge of English corresponds to B1 level according to the Eur	opean Language	Frame. The
B2 FI F	wing an language skins - whiling, speaking, reading, insteming, grammar and phonetics - and is submitted to the goal of obtain	ing the required s	
A0B04FCF4	FCF4	7	2
The course is aimed for	students, employees of the Faculty and the public whose knowledge of English corresponds to B1 level according to the Eur	opean Language	Frame. The
course focuses on impro	oving all language skills - writing, speaking, reading, listening, grammar and phonetics - and is submitted to the goal of obtain	ning the required s	skills needed for
B2 ELF.			
A0B04FCE3	FCE 3	Z	2
The course is aimed for	students, employees of the Faculty and the public whose knowledge of English corresponds to B1 level according to the Cor	mmon European I	Framework of
Reference for Language	es (CEFR). The course focuses on improving all language skills - writing, speaking, reading, listening, grammar and phonetic	s - and is submitte	ed to the goal of
obtaining the required s	kills needed for B2 CEFR.		
A0B04PZP	Preparation for stay in Germany	Z	2
A0B04RET	Rhetoric	Z	2
The objective of the sub	ject is to master and improve skills necessary for successful presentation as well as enhancing the communicative ability of	the prospective er	ngineers and
bachelors. This subject v	will enable the students to develop both spoken and written presentations, non verbal communication and remove the psychol	logical barriers for	public speaking
so that the students can	create a good image. The course "Retorika" provides an introduction to this subject.		
A0B04KR	Russian conversation	Z	2
A0B04KR2	Russian conversation 2	Z	2
A0B04R1	Russian language 1	Z	2
A0B04R2	Russian language 2	Z	2
A0B04R3	Russian language 3	Z	2
A0B04R4	Russian language 3	Z	2
A0B04KS1	Spanish conversation 1	Z	2
A0B04KS2	Spanish conversation 2	Z	2
A0B04S1	Spanish language 1	7	2
A0B04S2	Spanish language 2	7	2
A0B0492	Spanish language 2	7	2
A0B04S4	Spanish Language /	7	2
	Opanion Language 4 Technical English for Dro Intermediate		2
AUDU4CA	rechnical English für Pre-Intermediate	Z	۷

Code of the group: BETVK Name of the group: Physical 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
A0B03TVKL	Physical Education Course	Z	1	7dní	L	V
A0B03TVKZ	Physical Education Course	Z	1	7dní	Z	V
Characteristics of the A0B03TVKL Phy In the bachelor stage of study - games course - focuses on	courses of this group of Study Plan: Code=BETVK Name=Ph ysical Education Course y the student has to undergo one of P.E. courses (winter or summer course). These c improving the knowledge and skills on multigame level - courses of hiking, cycling, c	ysical Course ourses are aimed anoeing and comb	et improving	g exercise s s - special	Z kills. The summ courses - swim	1 ner course ming,
A0B03TVKZ Phy In the bachelor stage of study cross-country skiing, downhil	ysical Education Course y the student has to undergo one of P.E. courses (winter or summer course). These c Il skiing, snowboarding training.	ourses are aimed	at improving	exercise s	Z kills. The winter	1 r course -
Code of the group	b: BETV					
Name of the grou	p: Phisical Training					
Requirement cred	dits in the group:					
Requirement cou	rses in the group:					
Credits in the gro	up: 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
03TV	Physical Education	Z	1	2s	Z,L	V
A0B03TV3	Physical Education 3	Z	1	2s	Z	V
A0B03TV4	Physical Education 4	Z	1	2s	L	V
A0B03TV5	Physical Education 5	Z	1	2s	Z	V
A0B03TV6	Physical Education 6	Z	1	2s	L	V
Characteristics of the courses of this group of Study Plan: Code=BETV Name=Phisical Training 03TV Physical Education Z 1 The student can be enlisted in the subject PE. 03TV (7 times at maximum), the student gets one (1) credit (max. 7 credits during the whole study at FE.E.) after finishing the optional PE. subject. The syllabi of each sport disciplin can be found on the Internet address: http://www.Feld.cvut.cz/lee/K303 ADB03TV3 Physical Education 3 Z 1 The main goal of the physical training is to improve and extend locomotive skills which students have been earned within previous stages of their education as well as gain basic knowledge connected with kinantropology, hygienics and physiotherapy. Special attention is paid on the healthy lifestyle forming and compensation of sedentary occupation of students as a part of combat with civilization diseases. Within different study programmes, the Department of Physical Education and Sport differs following disciplines: aerobics, aikido, basketball, beach volleyball, badminton, bowling, skating, budo, floorball, football, frisbee, golf, in-line skating, canoeing, karate, fitness, downhill skiing, ice hockey, climbing, shooting bow, ninjutsu, swimming, softball, spinning, squash, table tennis, tennis, hiking, volleyball and health physical education. Students may choose one of above described sport disciplines: aerobics, aikido, basketball, beach volleyball, badminton, bowling, skating, budo, floorball, football, frisbee, golf, in-line skating, canoeing, karate, fitness, downhill skiing, ice hockey, climbing, shooting bow, nijutsu, swimming, softball, spinning, squash, table tennis, tennis, hiking, volleyball and health physical Education and Sport offers following disciplines: aerobics, aikido, basketball, beach volleyba						
their own interest and availat A0B03TV6 Phy The main goal of the physica knowledge connected with kii as a part of combat with civiliz beach volleyball, badminton, swimming, softball, spinning, their own interest and availat	ble capacity. ysical Education 6 I training is to improve and extend locomotive skills which students have been earned nantropology, hygienics and physiotherapy. Special attention is paid on the healthy life ration diseases. Within different study programmes, the Department of Physical Educat bowling, skating, budo, floorball, football, frisbee, golf, in-line skating, canoeing, karate squash, table tennis, tennis, hiking, volleyball and health physical education. Student ble capacity.	d within previous s style forming and ion and Sport offer , fitness, downhill s may choose one	tages of the compensation rs following of skiing, ice ho e of above d	ir educatior on of seden disciplines: a bockey, climb escribed sp	Z as well as gain tary occupation aerobics, aikido ing, shooting b ort disciplines a	1 n basic n of students b, basketball, ow, ninjutsu, according to

List of courses of this pass:

Code	Name of the course	Completion	Credits	
03TV	Physical Education	Z	1	
The student can be	enlisted in the subject P.E. 03TV (7 times at maximum), the student gets one (1) credit (max. 7 credits during the whole study at F.E.	.E.) after finishing	the optional	
	P.E. subject. The syllability of each sport disciplin can be found on the Internet address: http://www.Feld.cvut.cz/fee/K303	-	4	
AUBU31V3	Physical Education 3		1 nin honin	
knowledge connect	ed with kinantropology hygienics and physiotherapy. Special attention is paid on the healthy lifestyle forming and compensation of sec	dentary occupation	of students	
as a part of combat	with civilization diseases. Within different study programmes, the Department of Physical Education and Sport offers following discipline	es: aerobics, aikido	, basketball,	
beach volleyball, ba	dminton, bowling, skating, budo, floorball, football, frisbee, golf, in-line skating, canoeing, karate, fitness, downhill skiing, ice hockey, cli	mbing, shooting bo	ow, ninjutsu,	
swimming, softball,	spinning, squash, table tennis, tennis, hiking, volleyball and health physical education. Students may choose one of above described their own interest and available capacity.	l sport disciplines a	according to	
A0B03TV4	Physical Education 4	Z	1	
The main goal of	the physical training is to improve and extend locomotive skills which students have been earned within previous stages of their edu	cation as well as g	ain basic	
knowledge connect	ed with kinantropology, hygienics and physiotherapy. Special attention is paid on the healthy lifestyle forming and compensation of sec with civilization discasse. Within different study programmes, the Department of Physical Education and Sport offers following discipling	tentary occupation	of students	
beach vollevball, ba	dminton, bowling, skating, budo, floorball, football, frisbee, golf, in-line skating, canoeing, karate, fitness, downhill skiing, ice hockey, cli	mbina, shootina bo	w. niniutsu.	
swimming, softball,	spinning, squash, table tennis, tennis, hiking, volleyball and health physical education. Students may choose one of above described their own interest and available capacity.	l sport disciplines a	according to	
A0B03TV5	Physical Education 5	Z	1	
The main goal of	the physical training is to improve and extend locomotive skills which students have been earned within previous stages of their edu	cation as well as g	ain basic	
knowledge connect	ed with kinantropology, hygienics and physiotherapy. Special attention is paid on the healthy lifestyle forming and compensation of sec	dentary occupation	of students	
as a part of combat	with civilization diseases. Within different study programmes, the Department of Physical Education and Sport offers following discipline dminten howing exacting shares downhill skiing ice backey of	es: aerobics, aikido	, basketball,	
swimming, softball,	spinning, squash, table tennis, tennis, hiking, volleyball and health physical education. Students may choose one of above described	l sport disciplines a	according to	
	Their own interest and available capacity.	7	1	
AUDUS I VO	Physical EuuCalion of the physical training is to improve and extend locomotive skills which students have been earned within previous stages of their edu	∠ cation as well as o	l ain hasic	
knowledge connect	ed with kinantropology. hygienics and physiotherapy. Special attention is paid on the healthy lifestyle forming and compensation of sec	dentary occupation	of students	
as a part of combat	with civilization diseases. Within different study programmes, the Department of Physical Education and Sport offers following discipline	es: aerobics, aikido	, basketball,	
beach volleyball, ba	dminton, bowling, skating, budo, floorball, football, frisbee, golf, in-line skating, canoeing, karate, fitness, downhill skiing, ice hockey, cli	mbing, shooting bo	ow, ninjutsu,	
swimming, softball,	spinning, squash, table tennis, tennis, hiking, volleyball and health physical education. Students may choose one of above described their own interest and available capacity.	l sport disciplines a	according to	
A0B03TVKL	Physical Education Course	Z	1	
In the bachelor sta	ge of study the student has to undergo one of P.E. courses (winter or summer course). These courses are aimed at improving exerci	se skills. The sumr	ner course	
- games course	 focuses on improving the knowledge and skills on multigame level - courses of hiking, cycling, canoeing and combined courses - s windsurfing 	pecial courses - sw	vimming,	
A0B03TVKZ	Physical Education Course	Z	1	
In the bachelor sta	age of study the student has to undergo one of P.E. courses (winter or summer course). These courses are aimed at improving exerc	ise skills. The winte	er course -	
		7	2	
The course	e is aimed at foreign students studving in Czech. it further develops their language z	∠ al universitv stude	rts.∠	
A0B04C2Z	Czech language 2	Z	2	
The cours	e is aimed at foreign students studying in Czech, it further develops their language knowledge and skills to meet the needs of technic	al university stude	nts	
A0B04CA	Technical English for Pre-Intermediate	Z	2	
A0B04CAE1	Certificate of Advanced English CAE 1	Z	2	
The aim of the cou	se is to prepare for Certificate of Advanced English - the second highest level Cambridge ESOL exam. The course CAE1 covers unit	ts 1-4. Studying for	CAE helps	
you to improve your	language skills (reading, writing, English in use, listening and speaking) and use them in a wide range of contexts. The exam is based	on realistic tasks a	nd indicates	
the ability to use the	te language in practical situations. You will be able to participate in meetings and discussions, expressing opinions clearly and be able to participate in English speaking countries as proof of adequate language skills for courses to	e to understand ar	d in English	
as well as by emplo	ivers who require knowledge of a foreign language. CAE is taken by more than 60 000 people each year in more than 60 countries. If	t is possible but no	t necessary	
	for obtaining credit to take CAE at British Council.		,	
A0B04CAE2	Certificate of Advanced English CAE 2	Z	2	
The aim of the cou	se is to prepare for Certificate of Advanced English - the second highest level Cambridge ESOL exam. The course CAE2 covers uni	ts 5-8. Studying for	CAE helps	
you to improve your language skills (reading, writing, English in use, listening and speaking) and use them in a wide range of contexts. The exam is based on realistic tasks and indicates				
the ability to use the language in practical situations. You will be able to participate in meetings and discussions, expressing opinions clearly and be able to understand and produce				
as well as by employers who require knowledge of a foreign language. CAE is taken by more than 60 000 people each year in more than 60 countries. It is possible but not necessary				
for obtaining credit to take CAE at British Council. Student is allowed to enrol only into one CAE course during one semester.				
A0B04CAE3	Certificate of Advanced English CAE 3	Z	2	
The aim of the cour	The aim of the course is to prepare for Certificate of Advanced English - the second highest level Cambridge ESOL exam. The course CAE3 covers unit 9 - 12. Studying for CAE helps			
A0B04CIN		7	2	
A0B04F1	French language 1	 	2	
A0B04F2	French language 2	 	2	
A0B04F3	French Language 3	7	2	
		-	-	

A0B04FCE1	FCE 1	Z	2
The course is air	ned for students, employees of the Faculty and the public whose knowledge of English corresponds to B1 level according to the Euro	pean Language Fr	rame. The
course focuses on	improving all language skills - writing, speaking, reading, listening, grammar and phonetics - and is submitted to the goal of obtaining	the required skills	needed for
	B2 ELF.		
A0B04FCE2	FCE 2	Z	2
The course is air	ned for students, employees of the Faculty and the public whose knowledge of English corresponds to B1 level according to the Euro	pean Language Fr	rame. The
course focuses on	improving all language skills - writing, speaking, reading, listening, grammar and phonetics - and is submitted to the goal of obtaining	the required skills	needed for
	B2 ELF.		
A0B04FCE3	FCE 3	Z	2
The course is aim	, red for students, employees of the Faculty and the public whose knowledge of English corresponds to B1 level according to the Comi	, mon European Fra	mework of
Reference for Lang	guages (CEFR). The course focuses on improving all language skills - writing, speaking, reading, listening, grammar and phonetics -	and is submitted to	the goal of
	obtaining the required skills needed for B2 CEFR.		
A0B04FCE4	FCE4	Z	2
The course is air	ned for students, employees of the Faculty and the public whose knowledge of English corresponds to B1 level according to the Euro	pean Language Fr	rame. The
course focuses on	improving all language skills - writing, speaking, reading, listening, grammar and phonetics - and is submitted to the goal of obtaining	the required skills	needed for
	B2 ELF.		
A0B04GA		7	2
The aim of this co	l jurse is to extend and complement grammatical patterns covered in other English courses that are intended for full-time students. The	e course is meant r	nainly as a
	supplement for students who have not vet passed the B2 examination and are interested in further study and additional pract	tice.	
	German Grammar	7	2
		7	2
AUBU4JAP	Japanese	<u> </u>	2
A0B04KA	English Conversation 2		2
The course is des	igned for students who want to develop their communication skills. Students will be given the opportunity to use the vocabulary they a	already know, as w	ell as learn
	new words and phrases, to communicate on a variety of topics and themes. This course is not designed for beginners.	. <u> </u>	
A0B04KF1	French conversation 1	Z	2
A0B04KF2	French conversation 1	Z	2
A0B04KN	German Conversation	Z	2
A0B04KR	Russian conversation	7	2
		7	2
AUDU4KR2		<u> </u>	2
A0B04KS1	Spanish conversation 1		2
A0B04KS2	Spanish conversation 2	Z	2
A0B04N1	German language 1	Z	2
A0B04N2	German language 2	Z	2
40B04N3	German language 3	7	2
			2
	ecinical English Course	$ $ \angle $ $	Z
chaut technical aut	gred to students who have successionly passed the b2 examples that the example of the thermal participation of the succession of the succe	Into to be able to co	foront typoo
about technical sur	of taxts and short explanation of the produced by examining the structure and signed writing in ormat Linguisti and	practicity via 5 uli	lerent types
		7	
	Fibiessional German	<u> </u>	2
A0B04PZP	Preparation for stay in Germany	Z	2
A0B04R1	Russian language 1	Z	2
A0B04R2	Russian language 2	Z	2
A0B04R3	Russian language 3	Z	2
A0B04R4	Russian language 3	7	2
	Bhataria	7	2
The objective of t	Nitrollic		
hacholors. This sub	the subject is to master and improve skills necessary to successing presentation as were as emailting the communicative admity or in successing presentations, non-vertical communications and vertical sectors and explose the previous and vertical sectors and ver	e prospective engl	lic spoaking
	so that the students can create a nond image The nourse "Retorika" provides an introduction to this subject	car barriers for pub	ine speaking
A000401	So that the statement of the statement o	7	2
A0D0431			2
A0B04S2	Spanish language 2	Z	2
A0B04S3	Spanish language 3	Z	2
A0B04S4	Spanish Language 4	Z	2
ABAP9	Bachelor thesis	Z	9
AF8B01OGT	Optimization and Game Theory	7 7K	4
AE98128AD	Bashalar Project	7	
	Device of the Bachelor's degree study program A student will choose a topic from a range of topics related to his or her branch of st	<u> </u>	Specified by
branch	project to the Datieto subgree study program. A student will be defended in front of the bard of examiners for the comprehensive	final examination	specified by
	department of branch departments. The bachelor is project will be departed in the total of examiners of the comprehensive		
AE8B14ADP	Algorithm Development and Programming	Z,ZR	5
		and the second s	Syntax and
course objective.	Introduction to algorithm design of basic and more advanced computer tasks, Digital computer structure, Introduction to the C progra	imming language,	nointore
semantics. Basic	Introduction to algorithm design of basic and more advanced computer tasks, Digital computer structure, Introduction to the C progra c skills of procedural programming paradigm, variable, data type, declaration, operators, expressions, statements, functions, paramet	er passing, arrays,	pointers,
semantics. Basic structures, comp	Introduction to algorithm design of basic and more advanced computer tasks, Digital computer structure, Introduction to the C progra c skills of procedural programming paradigm, variable, data type, declaration, operators, expressions, statements, functions, paramet vilation and debugging methods, preprocessor, conditional compilation, standard libraries, specific of embedded computer systems pro-	amming language, er passing, arrays, rogramming and de	pointers, ebugging.
semantics. Basic structures, comp AE8B14BAP	Introduction to algorithm design of basic and more advanced computer tasks, Digital computer structure, Introduction to the C progra c skills of procedural programming paradigm, variable, data type, declaration, operators, expressions, statements, functions, paramet vilation and debugging methods, preprocessor, conditional compilation, standard libraries, specific of embedded computer systems pro- Bachelor Project	amming language, er passing, arrays, rogramming and de Z	pointers, ebugging. 9
semantics. Basic structures, comp AE8B14BAP AE8B15BAP	Introduction to algorithm design of basic and more advanced computer tasks, Digital computer structure, Introduction to the C progra c skills of procedural programming paradigm, variable, data type, declaration, operators, expressions, statements, functions, paramet illation and debugging methods, preprocessor, conditional compilation, standard libraries, specific of embedded computer systems pr Bachelor Project Bachelor's thesis	amming language, er passing, arrays, rogramming and de Z Z	pointers, ebugging. 9 9
AE8B16BAP	Introduction to algorithm design of basic and more advanced computer tasks, Digital computer structure, Introduction to the C progra c skills of procedural programming paradigm, variable, data type, declaration, operators, expressions, statements, functions, paramet illation and debugging methods, preprocessor, conditional compilation, standard libraries, specific of embedded computer systems pr Bachelor Project Bachelor's thesis Bachelor project	amming language, er passing, arrays, rogramming and de Z Z Z	pointers, ebugging. 9 9 9
semantics. Basic structures, comp AE8B14BAP AE8B15BAP AE8B16BAP AE8B17BAP	Introduction to algorithm design of basic and more advanced computer tasks, Digital computer structure, Introduction to the C progra c skills of procedural programming paradigm, variable, data type, declaration, operators, expressions, statements, functions, paramet illation and debugging methods, preprocessor, conditional compilation, standard libraries, specific of embedded computer systems pr Bachelor Project Bachelor's thesis Bachelor project Bachelor Project	amming language, er passing, arrays, rogramming and de Z Z Z Z	pointers, ebugging. 9 9 9 9 9
semantics. Basic structures, comp AE8B14BAP AE8B15BAP AE8B16BAP AE8B17BAP Independent final	Introduction to algorithm design of basic and more advanced computer tasks, Digital computer structure, Introduction to the C progra c skills of procedural programming paradigm, variable, data type, declaration, operators, expressions, statements, functions, paramet valiation and debugging methods, preprocessor, conditional compilation, standard libraries, specific of embedded computer systems provide Bachelor Project Bachelor's thesis Bachelor project Bachelor Project project for the Bachelor's degree study programme. A student will choose a topic from a range of topics related to his or her branch o	amming language, er passing, arrays, rogramming and de Z Z Z f study, which will b	pointers, ebugging. 9 9 9 9 9 9 oe specified
semantics. Basic structures, comp AE8B14BAP AE8B15BAP AE8B16BAP AE8B17BAP Independent final by branch departm	Introduction to algorithm design of basic and more advanced computer tasks, Digital computer structure, Introduction to the C progra c skills of procedural programming paradigm, variable, data type, declaration, operators, expressions, statements, functions, paramet vilation and debugging methods, preprocessor, conditional compilation, standard libraries, specific of embedded computer systems provide Bachelor Project Bachelor project Bachelor project project for the Bachelor's degree study programme. A student will choose a topic from a range of topics related to his or her branch o tent or branch departments. The Bachelor's project will be defended in front of the board of examiners for the comprehensive final examples.	amming language, er passing, arrays, rogramming and de Z Z f study, which will b amination. Bachelo	pointers, ebugging. 9 9 9 9 0e specified r, s projects

AE8B17ELD	Electrodynamics	Z,ZK	5
The course AEB17	. ELD (electrodynamics) is a follow up of the course AEB17EMTA (Electromagnetic field theory). The course starts with a decompositi	on of electromagne	etic field into
planewaves, introd	uces radiation of waves and guides student through the interaction of electromagnetic waves with material boundaries. The theory of	wave guides and tr	ransmission
lin	es is also shown. The course ends with wave scattering. The knowledge gained in this course is needed for number of specialized manual states and the special states and the special states and the special states and the special states are special states and the special states are special states and the special states are special states and the special states are sp	aster courses.	
AE8B17EMT	Electromagnetic Field Theory	Z,ZK	8
Students get acqu	ainted with physics fundaments of the electromagnetic theory and with its mathematical description. Particularly, the course guides s	tudent through ele	ctrostatics,
magnetostatics, ir	troduces coupling between time varying fields and it is ends with an introduction to an electromagnetic wave. The knowledge gained	in this course are	needed for
the sub	sequent course AE8B17ELD (Electrodynamics), for the course of circuit theory, theory of semiconductors and a number of specialize	ed master courses.	
AE8B31AAC	Analog and Acitve Circuits	Z,ZK	6
The subject AE8B3	ATAAC is oriented on presentation, matematical description, analysis and sythesis of basic analogue active circuits and function block	s of electronic sys	tems based
	on basic semiconductor electronic components operating in linear and non-linear modes.		
AE8B31BAP	Bachelor Project	Z	9
The subject Bache	lor Project is an independent final project for the Bachelor's degree study programme. A student will choose a topic from a range of t	opics related to his	or her field
of study, which wi	Il be specified by branch department or branch departments. The Bachelor's project will be defended in front of the board of examine	rs for the comprehe	ensive final
	examination.		
AE8B31CIR	Circuit Theory	Z,ZK	8
The subject AE8B3	BICIR is a complet systematic presentation of electrical circuit theory. It is based on general physical nature of electromagnetic effects.	an electric circuit is	s presented
as a special quasis	tationary case of electromagnetic field. It defines basic circuit quantities (voltage, current) and basic circuit elements modeling all kind	s of actual energy i	interactions.
The subject is spe	cifically oriented on linear electrical circuit (analogue LTI systems), it presents basic priciples and theorems of circuit theory, and ana	ysis methods of lin	near circuits
working in steady	and transient states (modes), respectively. The time domain and frequency domain analysis is strictly differentiated. "System? characterized and transient states (modes), respectively. The time domain and frequency domain analysis is strictly differentiated.	terization is applie	d on circuit
	transfer properties analysis, stability analysis, and feedback theory. At the end the subject deals with basis of discrete LTI system:	s theory.	
AE8B31ELE	Elements of Electronics	KZ	4
The subject AE8B	31ELE (B-ELE) is a free continuation of the subject AE8B32IES (B-IES), now with technical contents yet, that provides elementary ba	asis of electrical an	d electronic
engineering, descri	bes and explains common contexts among electrical phenomena, that are important for subsequent specialized subjects (for instance AE	8B31CIR (B-CIR),	AE8B31DIT
(B-DIT), AE8B31E	MT (B-EMT), AE8B31SAS (B-SAS).) The subject education uses relatively simple, elementary mathematical and physical methods	adequate to the 2n	d semester
of the bachelor stu	dy stage. The subject provides basis of: - electromagnetic field and electrical circuit theory - semiconductor components theory - signature field and electrical circuit theory - semiconductor components theory - signature field and electrical circuit theory - semiconductor components theory - signature field and electrical circuit theory - semiconductor components theory - signature field and electrical circuit theory - semiconductor components theory - signature field and electrical circuit theory - semiconductor components theory - signature field and electrical circuit theory - semiconductor components theory - signature field and electrical circuit theory - semiconductor components theory - signature field and electrical circuit theory - semiconductor components theory - signature field and electrical circuit theory - semiconductor components theory - signature field and electrical circuit theory - semiconductor components theory - signature field and electrical circuit theory - semiconductor components theory - signature field and electrical circuit theory - semiconductor components theory - signature field and electrical circuit theory - semiconductor components theory - semiconductor components theory - semiconductor components theory - semiconductor circuit theory - semiconductor components theory - semiconductor components theory - semiconductor circuit theory - semiconductor components theory - semiconductor components theory - semiconductor circuit the	hal and system the	ory - digital
	and microprocessor technique.		
AE8B32DCL	Digital Signal Processing and Communication Laboratory	<u> </u>	2
This is a shared pr	actical laboratory jointly practicing theoretical foundations gained in Digital Signal Processing (B-DSP), Digital Communications (B-D	CM) and Data Netv	work Theory
(B-DNT) courses	It demonstrates how these areas together allow designing a complex functional system. During the course, students will design a se	t of building blocks	s based on
individual pieces	or knowledge from the all above stated courses allowing at the end to build complex demonstration signal processing and communic	ation systems. The	laboratory
uses a computer ba	ased simulation system platform (e.g. Mattab) to practically verify the system functionality and its performance. It also demonstrates now	various CAD and m	athematical
	Switcols can be used in designing the system.	771	-
AE8B32DNT	Data Networks Theory	Z,ZK	5
AE8B32DSP	Digital Signal Processing	Z,ZK	5
	This subject is focused upon basics in the digital signal processing, systems and methods for digital signal processing.		-
AE8B32IES	Introduction to Electronic Systems	<u> </u>	2
This is a motivation	in subject with syllabus composed of a set of demonstrations and measurements. Its content is divided into several themes. Students	have a choice from	m this offer
based on their pr	e-knowledge. The goal is to complete the missing knowledge and skills which may vary in students comming from various schools. I	he next goal is to g	et an idea
		7	0
AEODOJDAP	Dacheler Project		9
AE8B34BAP	Bachelor Project	∠	9 a anasified
independent inal	project for the bachelor's degree study programme. A student will choose a topic from a range of topics related to his or ner branch of the deactment or branch departments. The Bachelor's project will be defended in from a range of topics related to his or ner branch of the department or branch of the department.	r study, which will b	be specified
	in department of branch departments. The bachelor's project will be detended in forth of the board of examiners for the complementaria		
AE8B34EOD	Electronic and Optoelectronic Devices	Z,ZK	6
I his course int	roduces the basic theory, principles of operation and properties of electronic and optoelectronic devices. Physical principles of operation and properties of electronic and optoelectronic devices. Physical principles of operation and properties of electronic and optoelectronic devices.	tion, device structu	res and
characteristics an	e explained together with adequate models for small- and large-signal. Basic applications in analogue and orginal electronics are exa- used to hasic priseitons of division immediate models for small-and large-signal basic division and outgotted a	f electron devices i	in electronia
	uced to basic principles of device simulation, measurement of device planateristics and extraction of device planateries. Operation c	i electron devices i	
AE0D2400T	Systems is then analyzed using the ropice simulator.	774	1
	JUIIU JULIE FILYSIUS	$ \mathcal{L}, \mathcal{L}^{n} $	iconductoro
	a on solid state physics including some parts of statistical physics. The subject minims about basic properties of materials used in electron		
AE8B35BAP	Bachelor Project	Ζ	9
AE8B35FCS	Feed-Back Control Systems	Z,ZK	6
Foundation cours	e of automatic control. Introduction to basic concepts and properties of dynamic systems of physical, engineering, biological, econor	nics, robotics and in	nformatics
nature. Basic pri	copies of reedback and its use as a tool for altering the benavior of systems and managing uncertainty. Classical and modern metho-	as for analysis and	design of
automatic control	systems. Students specialized in systems and control will build on these tides and knowledge in the advances to blow. Sit		nones anu
	programs will find out that control is a inspiring, ourquitous and entertaining nerd worth of a future cooperation.	7	0
AEOBJOBAP		<u>ک</u>	9
	Bachelor Project		9
Independent final	project for the Bachelor's degree study programme. A student will choose a topic from a range of topics related to his or her branch o	r study, which will b	be specified
	In department or branch departments. The bachelor's project will be defended in front of the board of examiners for the comprehensit		
		∠,∠K	5
ne course provid	es rundamentals or digital communications theory: modulation, classical coding, channel models, and basic principles of decoding. The service which allow to students the law to students	ie exposition is sys	stematically
built along the the	corelical lines which allow to reveal all inner connections and principles. This allows students to develop the knowledge and use it in a	in active way in a d	iesign and
construction	of the communication systems. The course provides a respectory fundamental had services of the system of the syste	options that	
	of the communication systems. The course provides a necessary fundamental background for subsequent more advanced commun	ications theory cou	
	of the communication systems. The course provides a necessary fundamental background for subsequent more advanced commun Digital Design	Z,ZK	5
The goal of this co	of the communication systems. The course provides a necessary fundamental background for subsequent more advanced commun Digital Design urse is to introduce the philosophy of digital circuits' design, to provide formal description of combinational and sequential logical circuits' design to provide formal description of combinational and sequential logical circuits' design.	zations theory cou Z,ZK ts, their functional l	blocks. Both
The goal of this con mathematical and	of the communication systems. The course provides a necessary fundamental background for subsequent more advanced commun Digital Design urse is to introduce the philosophy of digital circuits' design, to provide formal description of combinational and sequential logical circuit functional description, as well as minimization algorithms for output and transient functions of digital components and circuits is pres	zations theory cou Z,ZK ts, their functional t ented. Karnaugh n	blocks. Both blocks, latch

AE8B37SAS	Signals and Systems	Z,ZK	8	
Continuous and discrete time signal representation in time and frequency domain. Stochastic signals and their parameters. Elementary principles of analog modulations with their noise				
conditions. Fundamental course for further study focusing on communication, measurement and signal processing.				
AE8B37SSP	Statistical Signal Processing	Z,ZK	6	
The course provide	es fundamentals in three main domains of the statistical signal processing: 1) estimation theory, 2) detection theory, 3) optimal and ac	daptive filtering. Th	e statistical	
signal processing is	a core theory with many applications ranging from digital communications, audio and video processing, radar and radio navigation,	measurement and	experiment	
evaluation, etc.				
AE8B38BAP	Bachelor Project	Z	9	
AE8B38EME	Electronic Measurements	KZ	4	
The course is focused to metrology fundamentals and uncertainty apparatus. It explains both elementary principles and selected advanced methods used in electronics, telecommunications				
and radio communications.				
AE8B39BAP	Bachelor Project	Z	9	
BEEZB	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 of it. This introductory course				
contains fundamentals of Safety Electrical Engineering. In this way the students receive qualification of instructed person that enables them to work on electrical equipment.				
BEEZZ	Basic health and occupational safety regulations	Z	0	
The guidelines were worked out based on The Training Scheme for Health and Occupational Safety designed for employees and students of the Czech Technical University in Prague,				
which was provided by the Rector's Office of the CTU. Safety is considered one of the basic duties of all employees and students. The knowledge of Health and Occupational Safety				
regulations forms an integral and permanent part of qualification requirements. This program is obligatory.				

For updated information see <u>http://bilakniha.cvut.cz/en/FF.html</u> Generated: day 2025-07-22, time 14:42.