Study plan

Name of study plan: Electrical Engineering, Power Engineering and Management

Faculty/Institute/Others: Faculty of Electrical Engineering Department: Branch of study guaranteed by the department: Common courses Garantor of the study branch: Program of study: Electrical Engineering, Power Engineering and Management Type of study: Bachelor full-time Required credits: 177 Elective courses credits: 3 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: 133 The role of the block: P

Code of the group: 2018_BEEMBAP Name of the group: Bachelor Project Requirement credits in the group: In this group you have to gain 15 credits Requirement courses in the group: In this group you have to complete 1 course Credits in the group: 15 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
BBAP15	Bachelor thesis	Z	15	15s	L,Z	Р

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15

Characteristics of the courses of this group of Study Plan: Code=2018_BEEMBAP Name=Bachelor Project
BBAP15 Bachelor thesis

Code of the group: 2018_BEEMBBE

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

Characteristics of the courses of this group of Study Plan: Code=2018_BEEMBBE Name=Safety of the bachelor's studies

BEZB	Safety in Electrical Engineering for a bachelor's degree	Z	0				
The purpose of the safe	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.							
BEZZ	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.							

Code of the group: 2018_BEEMP

Name of the group: Compulsory subjects of the programme Requirement credits in the group: In this group you have to gain 118 credits Requirement courses in the group: In this group you have to complete 24 courses Credits in the group: 118

Note on the gro						
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
B0B01DRN	Differencial Equations and Numerical Analysis Petr Habala, Daniel Gromada, Josef Dvo ák, Karel Pospíšil Petr Habala Petr Habala (Gar.)	Z,ZK	4	2P+2C	L	Р
B1B38EMA	Electrical Measurements Jakub Svatoš Jakub Svatoš Jakub Svatoš (Gar.)	КZ	5	2P+2L	L	Р
B1B31EOS	Electric circuits Martin Pokorný, Michal Šimek Martin Pokorný Martin Pokorný (Gar.)	Z,ZK	6	3P+2S	Z	Ρ
B1B15EN11	Power Engineering 1 Ivo Doležel	Z,ZK	5	3P+2S	L	Ρ
B1B15EN2	Power Engineering 2 Ivo Doležel, Zden k Müller	Z,ZK	5	2P+2L	Z	Ρ
B1B17EMP	Electromagnetic Field Vít zslav Pankrác Vít zslav Pankrác Vít zslav Pankrác (Gar.)	Z,ZK	5	2P+2C	Z	Р
B1B34EPS	Elektronics for Heavy-current engeneering Vladimír Janí ek, Adam Bou a, Jan Novák, Tomáš Teplý, Tomáš Martan Vladimír Janí ek Vladimír Janí ek (Gar.)	КZ	4	2P+2L	Z	Р
B1B02FY1	Physics 1 Petr Koní ek Petr Koní ek Petr Koní ek (Gar.)	Z,ZK	8	4P+1L+2C	L	Р
B1B02FY2	Physics 2 Petr Koní ek Petr Koní ek (Gar.)	Z,ZK	7	3P+1L+2C	Z	Р
B0B01KANA	Complex Analysis Zden k Mihula, Hana Tur inová, Martin Bohata Martin Bohata Martin Bohata (Gar.)	Z,ZK	4	2P+2S	Z	Ρ
B0B01LAGA	Linear Algebra Daniel Gromada, Josef Dvo ák, Ji í Velebil, Natalie Žukovec, Mat j Dostál Ji í Velebil Ji í Velebil (Gar.)	Z,ZK	7	4P+2S	Z	Ρ
B0B01MA1A	Mathematical Analysis 1 Josef Dvo ák, Karel Pospíšil, Veronika Sobotíková Veronika Sobotíková Veronika Sobotíková (Gar.)	Z,ZK	6	4P+2S	z	Ρ
B0B01MA2A	Mathematical Analysis 2 Karel Pospíšil, Hana Tur inová, Martin Bohata, Jaroslav Tišer, Martin Kepela Jaroslav Tišer Petr Hájek (Gar.)	Z,ZK	6	4P+2S	L	Ρ
B1B13MVE1	Materials for Power Electrical Engineering Jan Zemen, Pavel Mach, Josef Sedlá ek, Karel Dušek, Ivana Beshajová Pelikánová Karel Dušek Pavel Mach (Gar.)	Z,ZK	4	2P+2L	z	Р
B0B99PRPA	Procedural Programming Stanislav Vítek Stanislav Vítek (Gar.)	ΚZ	4	2P+2C	Z	Р
B1BPROJ4	Bachelor project Zden k Müller, Ivana Beshajová Pelikánová, Jan Mikeš, Jan Kyncl, Jan Bauer, Karel Künzel, Vít Klein, Stanislav Bou ek, Ji í Vaší ek, Jan Bauer Jan Bauer (Gar.)	Z	4	4s	Z,L	Ρ
B1B13PPS	Industrial computer systems Karel Künzel Karel Künzel Karel Künzel (Gar.)	Z,ZK	4	2P+2L	L	Р
B1B13TEP	Electrical engineering technological processes Pavel Mach, Karel Dušek, Petr Veselý, Jan Kuba, Radek Procházka Karel Dušek Pavel Mach (Gar.)	Z,ZK	4	3P+2L	L	Ρ
B1B15VYA	Computational Applications Jan Kyncl Jan Kyncl (Gar.)	КZ	4	2P+2C	L	Р
B1B13VVZ1	Manufacturing of Power Devices Jan Kuba, Ji í Hájek, Petr Gric Ji í Hájek Ji í Hájek (Gar.)	Z,ZK	4	2P+2L	Z	Р
B1B14ZPO	Fundametals of Electric Drives Pavel Kobrle Pavel Kobrle	Z,ZK	5	2P+2L	Z	Ρ
B1B14ZSP	Electric Machines and Apparatuses Basics Pavel Kobrle, Pavel Mindl Pavel Kobrle Pavel Kobrle (Gar.)	Z,ZK	5	3P+2L	L	Р
B1B14ZEL1	Fundamentals of Electrotechnical Engineering Ivana Nová, Vít Hlinovský, Ji í Beranovský Ivana Nová	КZ	4	2P+2C	Z	Р
B1B14ZVE	Power Electronics Jan Bauer, Ji í Lettl Ji í Lettl Ji í Lettl (Gar.)	Z,ZK	4	2P+2L	Z	Р

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

 B0B01DRN
 Differencial Equations and Numerical Analysis
 Z,ZK
 4

 This course introduces students to the classical theory of ordinary differential equations (separable and linear ODEs) and also to bsics of numerical methods (errors in calculations and stability, numerical solutions of algebraic and differential equations and their systems). The course takes advantage of the synnergy between theoretical and practical point of view.

 B1B38EMA
 Electrical Measurements
 KZ
 5

 The subject is focused to fundamentals of measurement and instrumentation. Based on the principle of the methods of electrical quantities measurement (voltage, current, power, frequency, resistance, capacitance and inductance) a structure and properties of measuring instruments are explained including principles of their correct application and an accuracy estimation. Fundamentals of magnetic measurements close the course.

The subject describer fundamental motios of electrical circula analysis. The aim is to unity different level of knowledge of adults coring in subject of a meta subject. Represents the difference among physical circular of the meta presents the adultance of basic deal orizonal elements of the subject of the analysis and simulation of electrical circular by means of software tools. BIBISEN1 Power Engineering 1 C.Z.K 5 BIBISEN2 C.Z.K 5 BIBISEN2 C.M.C.K 5 BIBISEN2 C.M.C.K 5 BIBISEN2 C.M.C.K 5 BIBISEN2 C.M.C.K.K 5 BIBISEN2 C.M.K 5 BIBISEN2 C.M.C.K.K 5 BIBISEN2 C.M.C.K.K 5 B	B1B31EOS	Electric circuits	Z,ZK	6
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of the sound of the analysis and animation of electral arouts by means of software tool. BBISENT III Power Engineering 1 ZZK 5 BISENT III Electronragence Field ZZK 6 A BISENT III Electronragence Field ZZK 6 A BISENT III Electronragence Field ZZK 8 A BISENT III Electronragence Field ZZK 8 A A A BISENT III Electronragence Field ZZK 8 A A A A A A A A A A A A A A A A A A A				-
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B161EEN2 Power Engineering 2 2,2K 5 B1617EMP Electromagnetic Field 2,2K 5 B1617EMP Electromagnetic Field 2,2K 5 B1637EMP Electromagnetic Field 2,2K 5 B1632EPS Electromagnetic Field KZ 4 Knowledge of current basic passive and ache electronic components. Structure, physical and circuit properties of components. Structure, physical and circuit properties of components. The structure and physical and circuit properties of components. Structure, physical and circuit properties of components and physical electronic file measure intervence in the structure and physics. The factors is a dasacial mechanic and the electronic on figuration file. The value of the structure in structu	of the results of the an	alysis and simulation of electrical circuits by means of software tools.		
BTBTERMP Electromagnetic Field Z.ZK 5 BTB3AEPS Elektronics for Heavy-current angeneering KZ 4 Kowiege of current bacic passive and accessive electron agreedering KZ 4 Kowiege of current bacic passive and accessive electron agreedering KZ 4 Kowiege of current bacic passive and accessive electron agreedering KZ 8 BTB3ZP1 Physics 1 CZ 7 BTB3ZP1 Physics 2 The colorable physics 2 The colorable physics 2 BTB3ZP12 Physics 2 The colorable physics 2 The colorable physics 2 The colorable physics 2 The colorable physics 2 Physics 2 The colorable physics 2 The colorable physics 2 The colorable physics 2 The colorable physics 2 Physics 2 The colorable physics 2 <td< td=""><td>B1B15EN11</td><td>Power Engineering 1</td><td></td><td>5</td></td<>	B1B15EN11	Power Engineering 1		5
The course gets in students accurred with principles and applied electromagnetic field teory basis. BTB34EPS BTB34EPS BTB34EPS EDENtronics for Heavy-current teoring principles of course of principle and explored signals. Mere complex circuit systems and communication technologies. Measuring the meet important applications of modern semiconductors derices. BTB02F1 Prysics 1 CZK 8 BTB02F1 Prysics 2 CZK 7 FTTB02F1 Prysics 2 FTB02F12 Prysics 2 FTC FTTB02F12 Prysics 2 FTTB02F1 Prysics 2 FTTB02F1 Prysics 2 FTTB02F1 Prysics 2 FTTB02	B1B15EN2	Power Engineering 2	Z,ZK	5
$\begin{aligned} B1B3EPS & [Elektronics for Heavy-current engeneering from the physical and circuit properties of components behavior when ownsking which behavior and anothing which the antice and an analog, digits and optical sequences. More complex arrows systems and communication technologies. Measuring the most important applications of modern emericonductor diverses. BIB02F1 Physics 1 Electronic Engeneering - Physics 1, is detected to the introduction into two important areas of physics. The fractione are a classical mechanics, the students subject is and subject field. Within the framework of the classical mechanics, the students and years, which they can are a classical mechanics, speed frame classical mechanics, sheed of their classical students and the score attractions. The students and years, which are classical mechanics, speed framework of the classical mechanics, below of district and cancel for the student of the classical mechanics, advect of the classical mechanics, below of district and cancel to the students are independent on the classical mechanics in belowice by the raid distribution of the mechanics. The students are independent on the classical mechanics in the source Physics 2. The students are independent on the classical mechanics in the source of the students and the source Physics 2. The source Physics 2. The students are independent on the source of the source Physics 2. The source Phys$	B1B17EMP		Z,ZK	5
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The basic course of physics at the Faculty of Electrical Engineering - Physics 1, is devided to the introduction into two important rarses of physics. The first one is a classical mechanics with the again mechanics and the again devides in the section of any again (Edv. Umine the classical interchanics, between study the particle knewnics, cymanics of the mang sarchele, spate under a study of electrical character interchanics and the section of any again (Edv. Umine the classical interchanics, electric and magnetic field. Within the faramework the text again into the course is the study of electrotechnical materials or radioelectronics. Apart of this, the knowledge gained in this course is the study of electrotechnical materials or radioelectronics. Apart of this, the knowledge gained in this course is the study of electrotechnical materials or radioelectronics. Apart of this, the knowledge gained in this course is the study of the study of the study of the course Physics 2 is closely linked with the course Physics 1. Within the framework of this course the students to understand the prevented description of the waves has a coulds or optical waves are the subjects of the following paceton. Quantum methanics and under physics NII complex Analysis is the student's general education in physics. The knowledge gained in this course will help to the students to understand there are an electronic of the prevented education of physics. The knowledge gained in this course and will help the students on tables of the students. BBOBIIANA Complex Analysis 1 The student and integrat clachular of one real variables. The knowledge gained in this course and surfaces integrates. Other part consists for the student of the prevented and the prevented education of the students. BBOBIIANA Complex Analysis 2 The student and integrat clachular of normal variables. The student and integrat clachular of normal variables. The student and integrat clachular of normal variables. The student and integrat clachular of one real variables. The		Physics 1	7 7K	8
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consequence ourse Physics 2. Physics 2 Z,ZK 7 The ocurse Physics 2 is closely index with the curse Physics 1. Within the framework of this curse the students wall first of all earn foundations of thermodynamics. Following tapis The ocurse Physics 2 Z,ZK 7 The ocurse Physics 2 is closely index with the student's age indicate types of values, such as acoustic or optical values are the students in study of such modern areas as robotics, computer vision, measuring technique, and vill allow them to understand the principles of novel technologies and functioning of new electronic devices. BOBD1LAGA Complex Analysis Z,ZK 4 BOBD1LAGA Linear Algebra Z,ZK 4 BOBD1LAGA Linear Algebra Z,ZK 6 The subject covers an introduction to the differential and integral calculus of functions of one real variables and basic relations between curve and surface integrals. Other part contains functions and series and gower series with application to Taylor and Fourier series. Z,ZK 4 BIB13MVE1 Materials for Power Electrical Engineering X,ZK 4 BIB13MVE1 Materials for Power Electrical Engineering with weighbrain and their application. Z,ZK 4 BIB13MVE1 Materials and senicorducutors, wh	studies. The classical	nechanics is followed by the relativistic mechanics, electric and magnetic field - both stationary as well as non-stationary. The	ne students can use tl	he facts gained
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Code of the group: 2015_BZAJ Name of the group: Exam from the english language Requirement credits in the group:

Requirement courses in the group: In this group you have to complete 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
B0B04B1K	English language B1 - classified assessment Markéta Havlí ková, Pavla Péterová, Erik Peter Stadnik, Michael Ynsua, Dana Saláková, Petra Juna Jennings Petra Juna Jennings Petra Juna Jennings (Gar.)	κz	0	0C	Z,L	Р
B0B04B2Z	English language B2 - exam Michael Ynsua, Dana Saláková, Petra Juna Jennings Petra Juna Jennings Petra Juna Jennings (Gar.)	Z,ZK	0	0C	Z,L	Ρ

Characteristics of the courses of this group of Study Plan: Code=2015_BZAJ Name=Exam from the english language

B0B04B1K	English language B1 - classified assessment
verifying of the student	s skills of B1 level

B0B04B2Z English language B2 - exam

Z,ZK 0

ΚZ

0

I) The B2 English Exam is a compulsory subject for all Faculty of Electrical Engineering students at the Czech Technical University. According to the Study and Examination Rules and Regulations for Students at CTU (Part III, Article 4), a compulsory subject is one "whose completion is a necessary condition in order to successfully complete the study programme." In addition, this requires the "passing of an examination evaluated on the scale A, B, C, D, or E..." (SERR Part III, Article 6). II) According to the Common European Framework of Reference for Languages (CEFR), an international standard for describing language ability, the definition of an English language learner who has achieved the B2 (Upper-Intermediate) level is one who "...can understand the main ideas of complex text on both concrete and abstract topics, including technical discussions in his/her field of specialisation. Can interact with a degree of fluency and spontaneity that makes regular interaction with native speakers quite possible without strain for either party. Can produce clear, detailed text on a wide range of subjects and explain a viewpoint on a topical issue giving the advantages and disadvantages of various options." III) Students who have successfully passed an approved international exam within the past five years may present their certificate to the Department of Languages, Faculty of Electrical Engineering.Upon approval, students are then exempt from both the Written Test and the Oral Part. For a list of approved international exams go the department website: http://jazyky.fel.cvut.cz/

Name of the block: Povinné p edm ty zam ení Minimal number of credits of the block: 30 The role of the block: PZ

Code of the group: 2018_BEEMPS1 Name of the group: Compulsory subjects of the branch 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 6 courses

Credits in the group: 30 Note on the group:

Specializace - aplikovaná elektrotechnika

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
B1B15EN3	Power Engineering 3 Jan Kyncl, Petr Žák, Petr Žák Jan Kyncl (Gar.)	KZ	4	2P+2L	Z	ΡZ
B1B16MME	Macro and Microekonomics Miroslav Vítek, Helena Fialová, Lubomír Lízal, Jan Jandera, Blanka Ku erková Helena Fialová Lubomír Lízal (Gar.)	Z,ZK	5	2P+2S	Z	PZ
B1B14MIS	Microprocessors for Power Systems Jan Bauer Jan Bauer Ji í Zd nek (Gar.)	Z,ZK	5	2P+2L	Z	ΡZ
B1B13SSE1	Solar Systems and Electrochemical Sources Pavel Hrzina, Vít zslav Benda Pavel Hrzina Vít zslav Benda (Gar.)	Z,ZK	5	2P+2L	L	ΡZ
B0B01STP	Statistics and Probability Kate ina Helisová, Jakub Stan K, Miroslav Korbelá, Bogdan Radovi Kate ina Helisová Kate ina Helisová (Gar.)	Z,ZK	5	2P+2S	L	PZ
B1B13VES	Manufacturing of Electrical Components Václav Papež Václav Papež Václav Papež (Gar.)	Z,ZK	6	2P+2L	L	ΡZ

Characteristics of the courses of this group of Study Plan: Code=2018_BEEMPS1 Name=Compulsory subjects of the branch

B1B15EN3	Power Engineering 3	KZ	4				
B1B16MME	Macro and Microekonomics	Z,ZK	5				
Basic economic terms, r	Basic economic terms, market, law of demand, law of supply, market equilibrium, price regulation, price and income elasticities, consumer's behavior, producer's behavior, cost, revenue,						
profit, market failure, monopoly, government macroeconomic policy, gross domestic product, multipliers, money, inflation, banking system, monetary policy, labor market, business							
cycle, fiscal policy, forei	gn trade policy, comparative advantage, CR and EU, Euro.						
B1B14MIS	Microprocessors for Power Systems	Z,ZK	5				
Power electronics control computer structure, digital signal processor and ALU added features for fast real time calculations. Interrupt system and DMA system, analog signal measurement, fast impulse signal measurement, fast impuls							
systems software development, programming techniques, software development tools (simulators, emulators, monitors), input signal conditioning circuitry, conversion from analog signals to digital processing, time sampling, amplitude quatization, power electronics control block design and implementation, difference equations and control algorithms, fixed and							
floating point calculations, debugging methods, program parametrization, guides and rules for implementation and application of power system control computers. Real time operating							
system, scheduler, dispatcher and another features and guides for application							

B1B13SSE1	Solar Systems and Electrochemical Sources	Z,ZK	5			
The course familiarizes	students with the basic principles of electrochemical sources and photovoltaic cells and systems. At the beginning, the emph	asis is on underst	anding the basic			
principle using the equi	valent circuits and mathematical description. In the next section, the basic types of electrochemical sources and their technical p	arameters are exp	lored separately.			
Similarly, students bec	ome familiar with the technology of photovoltaic cells and modules. Another chapter is devoted to the basic applications such	as solar-thermal.	At the end of the			
course, students becor	ne familiar with economical and technological implications of the combination of solar systems and electrochemical sources.					
B0B01STP	Statistics and Probability	Z,ZK	5			
B1B13VES Manufacturing of Electrical Components Z,ZK 6						
Technology of electric	omponents in general. Basic technology in use. Type of components: resistors, potentiometers, capacitors with foil dielectric. C	eramic and electr	olytic capacitors.			
Electromechanical dev	ices. Semiconductors, fabrication of vertical and horizontal structures. Packaging					

Name of the block: Compulsory elective courses Minimal number of credits of the block: 14 The role of the block: PV

Code of the group: 2018_BEEMH

Name of the group: Humanities subjects

Requirement credits in the group: In this group you have to gain at least 4 credits (at most 28) Requirement courses in the group: In this group you have to complete at least 1 course (at most 9) Credits in the group: 4

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
B0B16ET1	Ethic 1 Vladimír Sláme ka Vladimír Sláme ka Vladimír Sláme ka (Gar.)	КZ	4	2P+2C	Z	PV
B0B16FIL	Philosophy Peter Zamarovský Peter Zamarovský (Gar.)	ZK	2	2P+0S	Z,L	PV
B0B16FI1	Philosophy 1 Peter Zamarovský Peter Zamarovský (Gar.)	KZ	4	2P+2S	Z	PV
B0B16HTE	History of technology and economic Jan Mikeš, Marcela Efmertová Marcela Efmertová (Gar.)	ZK	2	2P+0S	Z,L	PV
B0B16HT1	History of science and technology 1 Jan Mikeš, Marcela Efmertová Marcela Efmertová (Gar.)	KZ	4	2P+2S	Z	PV
B0B16HI1	History 1 Milena Josefovi ová Milena Josefovi ová Milena Josefovi ová (Gar.)	KZ	4	2P+2S	Z	PV
B0B16MPS	Psychology Jan Fiala Jan Fiala Jan Fiala (Gar.)	Z,ZK	4	2P+2S	Z,L	PV
B0B16MPL	Psychology for managers Jan Fiala Jan Fiala Jan Fiala (Gar.)	ZK	2	2P+0S	Z,L	PV
A003TV	Physical Education	Z	2	0+2	L,Z	PV

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

Ethic 1	KZ	4				
Aim of this subject is to provide the students an orientation not only in general problems of ethics but above all to offer instructions for solving various situations of human life. Essential						
discussions in which students can react to lectures but also to actual questions coming with news and look for the communa	l answers.					
Philosophy	ZK	2				
nportant persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of philo	sophy and conne	tion of old				
rith recent problems of science, technology, economics and politics.						
Philosophy 1	KZ	4				
nportant persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of philo	sophy and conne	tion of old				
rith recent problems of science, technology, economics and politics.						
History of technology and economic	ZK	2				
History of science and technology 1	KZ	4				
History 1	KZ	4				
Psychology	Z,ZK	4				
Psychology for managers	ZK	2				
Physical Education	Z	2				
	Provide the students an orientation not only in general problems of ethics but above all to offer instructions for solving various discussions in which students can react to lectures but also to actual questions coming with news and look for the communal Philosophy aportant persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of philosophy 1 aportant persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of philosophy 1 aportant persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of philosophy 1 aportant persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of philosophy 1 aportant persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of philosophy 1 aportant persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of philosophy 1 aportant persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of philosophy 1 aportant persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of philosophy and the recent problems of science, technology, economics and politics. History of technology and economic History of science and technology 1 History 1 Psychology for managers	rovide the students an orientation not only in general problems of ethics but above all to offer instructions for solving various situations of hum discussions in which students can react to lectures but also to actual questions coming with news and look for the communal answers. Philosophy ZK portant persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of philosophy and connect ith recent problems of science, technology, economics and politics. KZ Philosophy 1 KZ aportant persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of philosophy and connect ith recent problems of science, technology, economics and politics. KZ History of technology and economic ZK History of science and technology 1 KZ History 1 KZ Psychology Z,ZK Psychology for managers ZK				

Code of the group: 2018_BEEMPV1 Name of the group: Compulsory subjects of the programm Requirement credits in the group: In this group you have to gain 10 credits Requirement courses in the group: In this group you have to complete 2 courses Credits in the group: 10 Note on the group: Specializace - Aplikovaná elektrotechnika

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
B1B15EPR1	Projects in Power Engineering Stanislav Bou ek	KZ	5	2P+2S	L	PV
B1B14TME1	Engineering mechanics Petr Ko árník Petr Ko árník Petr Ko árník (Gar.)	Z,ZK	5	2P+2C	L	PV
B1B13TPR	Technological Project Planning Karel Dušek, Petr Gric, Martin Molhanec Karel Dušek Martin Molhanec (Gar.)	Z,ZK	5	2P+2S	L	PV
B1B16UEE1	Economy of Power Industry Ji í Vaší ek, Miroslav Vítek, Jaroslav Knápek Miroslav Vítek Jaroslav Knápek (Gar.)	Z,ZK	5	2P+2C	Z	PV

Characteristics of the courses of this group of Study Plan: Code=2018_BEEMPV1 Name=Compulsory subjects of the programm

B1B15EPR1	Projects in Power Engineering	KZ	5		
B1B14TME1	Engineering mechanics	Z,ZK	5		
This course provides knowledge of applied mechanics for the industry practice. Analysis of constructional elements and their dimensioning. Kinematics of simple mechanisms. Dynamic					
behaviour of mechanical systems, mechanic vibrations. Thermodynamics of real gases and vapours, their processes an cycles, basic comparative cycles of heat machines. Fundamentals					
of hydrodynamics, trans	sport losses in hydraulic systems.				
B1B13TPR	Technological Project Planning	Z,ZK	5		
Principles of Project Ma	nagement. Project Life Cycle. Project Framework. Project phases: Initial, Construct, Delivery and Support. Organizational projec	t structure. Strateo	gic management:		
SWOT, PEST and 5F. F	roject logic frame. Project schedule, GANTT, PERT. Process modelling. Management of risks and knowledge. Standards and	l norms. Human re	esources		
management. Funding.					
B1B16UEE1	Economy of Power Industry	Z,ZK	5		
DIDIOUEEI		<u>ک,۲۲</u>	5		

Name of the block: Elective courses Minimal number of credits of the block: 0 The role of the block: V

Code of the group: 2015_BJKA

Name of the group: English 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
B0B04A21	English Language A2-1 Dana Saláková	Z		2s	Z	V
B0B04A22	English Language A2-2 Dana Saláková	Z	0	2s	L	V
B0B04B11	English Language B1-1 Petra Juna Jennings Petra Juna Jennings (Gar.)	Z	0	2C	Z	V
B0B04B12	English Language B1-2 Petra Juna Jennings Petra Juna Jennings (Gar.)	Z	0	2C	L	V
B0B04B21	English Language B2-1 Petra Juna Jennings Petra Juna Jennings (Gar.)	Z	3	2C	Z	V
B0B04B22	English Language B2-2 Petra Juna Jennings Petra Juna Jennings (Gar.)	Z	3	2C	Z,L	V

Characteristics of the courses of this group of Study Plan: Code=2015_BJKA Name=English language courses

B0B04A21	English Language A2-1	Z				
The course is open to s	tudents who are beginners in their second language. Course objective: Achieving competence in basic English.					
B0B04A22	English Language A2-2	Z	0			
The course is open to students who are beginners in their second foreign language. The course objective is to develop and sustain their basic knowledge of the English language.						
30B04B11 English Language B1-1 Z 0						
Course objective: Broadening the basic knowledge of general English; mastering basic specialised language; focusing on text analysis and vocabulary expansion; understanding spoken						
English.						
B0B04B12	English Language B1-2	Z	0			
Course objective: Broad	ening the basic knowledge of general English; mastering basic specialised language; focusing on text analysis and vocabulary	expansion; under	standing spoken			
English.						
B0B04B21	English Language B2-1	Z	3			
This course is designed	as a full-year, two semester preparation course for the university's compulsory B2-level English Examination (Anglický jazyk	B2 - zkouška - B0	B04B2Z*). While			
the course is focused of	n helping students reach a level required to pass the B2-level English Examination (or improve their English for a higher marl	k), it also focuses	more on the			
academic and technical	vocabulary and grammar expected of students at the university level. *NOTE: This exam is also used for determining an approximately approximately and the students at the university level.	priate level of Eng	lish for Erasmus			
/ International Study.						

B0B04B22

English Language B2-2

This course is designed as a full-year, two semester preparation course for the university's compulsory B2-level English Examination (Anglický jazyk B2 - zkouška - B0B04B2Z *). While the course is focused on helping students reach a level required to pass the B2-level English Examination (or improve their English for a higher mark), it also focuses more on the academic and technical vocabulary and grammar expected of students at the university level. *NOTE: This exam is also used for determining an appropriate level of English for Erasmus / International Study.

7

3

Code of the group: BTV 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
A003TV	Physical Education	Z	2	0+2	L,Z	V
TV-V1	Physical education	Z	1	0+2	Z,L	V
TVV0	Physical education	Z	0	0+2	Z,L	V

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

A003TV	Physical Education	Z	2
TVV	Physical education	Z	0
TV-V1	Physical education	Z	1
TVV0	Physical education	Z	0

Code of the group: BTVK

Name of the group: Physical education 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
TVKLV	Physical Education Course	Z	0	7dní	L	V
TVKZV	Physical Education Course	Z	0	7dní	Z	V

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

TVKLV	Physical Education Course	Z	0
TVKZV	Physical Education Course	Z	0

Code of the group: 2018_BEEMVOL

Name of the group: Elective subjects Requirement credits in the group: Requirement courses in the group: Credits in the group: 0 Note on the group:

~Nabídku volitelných předmětů uspořádaných podle kateder najdete na webových stránkách http://www.fel.cvut.cz/cz/education/volitelne-predmety.html\\

List of courses of this pass:

Code	Name of the course	Completion	Credits
A003TV	Physical Education	Z	2

DADA (DDN)		3 31/	
B0B01DRN	Differencial Equations and Numerical Analysis	Z,ZK	4
	ices students to the classical theory of ordinary differential equations (separable and linear ODEs) and also to bsics of numerical method	-	
-	al solutions of algebraic and differential equations and their systems). The course takes advantage of the synnergy between theoretica		
B0B01KANA	Complex Analysis	Z,ZK	4
B0B01LAGA	Linear Algebra	Z,ZK	7
B0B01MA1A	Mathematical Analysis 1	Z,ZK	6
	This is an introductory course to differential and integral calculus of functions of one real variable.		
B0B01MA2A	Mathematical Analysis 2	Z,ZK	6
The subject cover	rs an introduction to the differential and integral calculus in several variables and basic relations between curve and surface integrals.	Other part conta	ins function
	series and power series with application to Taylor and Fourier series.		
B0B01STP	Statistics and Probability	Z,ZK	5
B0B04A21	English Language A2-1	Z	
	The course is open to students who are beginners in their second language. Course objective: Achieving competence in basic Er	nglish.	
B0B04A22	English Language A2-2	Z	0
The course is ope	en to students who are beginners in their second foreign language. The course objective is to develop and sustain their basic knowled	lge of the English	language.
B0B04B11	English Language B1-1	Z	0
Course objective: B	roadening the basic knowledge of general English; mastering basic specialised language; focusing on text analysis and vocabulary expansion English.	ansion; understa	nding spoke
B0B04B12	English Language B1-2	Z	0
	roadening the basic knowledge of general English; mastering basic specialised language; focusing on text analysis and vocabulary expa	_	-
	English.		i anig opono
B0B04B1K	English language B1 - classified assessment	KZ	0
20201011	verifying of the student's skills of B1 level	1.2	
B0B04B21	English Language B2-1	Z	3
	ا - gned as a full-year, two semester preparation course for the university's compulsory B2-level English Examination (Anglický jazyk B2	_	-
	used on helping students reach a level required to pass the B2-level English Examination (or improve their English for a higher mark),		
	nical vocabulary and grammar expected of students at the university level. *NOTE: This exam is also used for determining an appropriat		
	/ International Study.	0	
B0B04B22	English Language B2-2	Z	3
	gned as a full-year, two semester preparation course for the university's compulsory B2-level English Examination (Anglický jazyk B2 - 2	_	-
	used on helping students reach a level required to pass the B2-level English Examination (or improve their English for a higher mark),		-
	nical vocabulary and grammar expected of students at the university level. *NOTE: This exam is also used for determining an appropriat		
	/ International Study.		
B0B04B2Z		Z.ZK	0
	/ International Study. English language B2 - exam xam is a compulsory subject for all Faculty of Electrical Engineering students at the Czech Technical University. According to the Stud	,	-
) The B2 English E	English language B2 - exam	y and Examinati	on Rules an
) The B2 English E Regulations for Stu	English language B2 - exam	ly and Examination mplete the study	on Rules an programme
) The B2 English E Regulations for Stu In addition, this re	English language B2 - exam exam is a compulsory subject for all Faculty of Electrical Engineering students at the Czech Technical University. According to the Stud adents at CTU (Part III, Article 4), a compulsory subject is one "whose completion is a necessary condition in order to successfully cor	ly and Examination mplete the study non European Fra	on Rules an programme amework of
) The B2 English E Regulations for Stu In addition, this re Reference for Lang level is one who "	English language B2 - exam exam is a compulsory subject for all Faculty of Electrical Engineering students at the Czech Technical University. According to the Stud idents at CTU (Part III, Article 4), a compulsory subject is one "whose completion is a necessary condition in order to successfully cor equires the "passing of an examination evaluated on the scale A, B, C, D, or E" (SERR Part III, Article 6). II) According to the Comm juages (CEFR), an international standard for describing language ability, the definition of an English language learner who has achieved can understand the main ideas of complex text on both concrete and abstract topics, including technical discussions in his/her field of	ly and Examinati mplete the study ion European Fra d the B2 (Upper- of specialisation.	on Rules an programme amework of Intermediate Can interac
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) The B2 English E Regulations for Stu In addition, this re Reference for Lang level is one who " with a degree of fl range of subjects	English language B2 - exam exam is a compulsory subject for all Faculty of Electrical Engineering students at the Czech Technical University. According to the Stud idents at CTU (Part III, Article 4), a compulsory subject is one "whose completion is a necessary condition in order to successfully con- equires the "passing of an examination evaluated on the scale A, B, C, D, or E" (SERR Part III, Article 6). II) According to the Comm uages (CEFR), an international standard for describing language ability, the definition of an English language learner who has achieved can understand the main ideas of complex text on both concrete and abstract topics, including technical discussions in his/her field of luency and spontaneity that makes regular interaction with native speakers quite possible without strain for either party. Can produce of and explain a viewpoint on a topical issue giving the advantages and disadvantages of various options." III) Students who have succe	ly and Examinati mplete the study ion European Fra d the B2 (Upper- of specialisation. clear, detailed te assfully passed a	on Rules ar programme amework of Intermediate Can interact kt on a wide n approved
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The B2 English E Regulations for Stu- In addition, this re Reference for Lang level is one who " with a degree of fl range of subjects international exam B0B16ET1	English language B2 - exam exam is a compulsory subject for all Faculty of Electrical Engineering students at the Czech Technical University. According to the Stud idents at CTU (Part III, Article 4), a compulsory subject is one "whose completion is a necessary condition in order to successfully cor equires the "passing of an examination evaluated on the scale A, B, C, D, or E" (SERR Part III, Article 6). II) According to the Comm uages (CEFR), an international standard for describing language ability, the definition of an English language learner who has achieved can understand the main ideas of complex text on both concrete and abstract topics, including technical discussions in his/her field of luency and spontaneity that makes regular interaction with native speakers quite possible without strain for either party. Can produce of and explain a viewpoint on a topical issue giving the advantages and disadvantages of various options." III) Students who have succes within the past five years may present their certificate to the Department of Languages, Faculty of Electrical Engineering.Upon appro- from both the Written Test and the Oral Part. For a list of approved international exams go the department website: http://jazyky.fel. Ethic 1	ly and Examinati mplete the study ion European Fra d the B2 (Upper- of specialisation. clear, detailed te: assfully passed a val, students are cvut.cz/ KZ	amework of Intermediate Can interact (t on a wide n approved then exemption
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nuclear physics will complete the student?s general education in physics. The knowledge gained in this course will help to the students in study of such modern areas as robotics, computer vision, measuring technique and will allow them to understand the principles of novel technologies and functioning of new electronic devices.

B1B13MVE1	puter vision, measuring technique and win allow them to understand the principles of novel technologies and functioning of new elec-		
	Materials for Power Electrical Engineering	Z,ZK	4
	description of basic properties and basic types of materials for electrical engineering is carried out. Types of conductors, supercondu- niconductors, which are used in power electrical engineering, are presented. The stress is put on relationships between properties, t		-
	n higher detail, with ceramics for electrical engineering, with properties of mica, glass and their applications, with environmental cond		
	for thin and thick films and with selected nanomaterials and their applications.	-	
B1B13PPS	Industrial computer systems	Z,ZK	4
	ed on basic knowledges about computer control systems used in electrotechnic engineering and energetics. Students works with har		
-	oftware tools and application examples. There are presented elementary digital circuits, the representation of numbers and their proc ck of microprocessor and microcomputer. The single chip microcomputer, embedded application, industrial PC and design to industri	-	
B1B13SSE1	Solar Systems and Electrochemical Sources	Z,ZK	5
1	zes students with the basic principles of electrochemical sources and photovoltaic cells and systems. At the beginning, the emphasis	,	-
	quivalent circuits and mathematical description. In the next section, the basic types of electrochemical sources and their technical paran		
-	become familiar with the technology of photovoltaic cells and modules. Another chapter is devoted to the basic applications such as s		e end of the
B1B13TEP	urse, students become familiar with economical and technological implications of the combination of solar systems and electrochem Electrical engineering technological processes	Z,ZK	4
	ed in electronics, laser, and other beam technologies and IC packaging will be characterized. There will also be discussed fundamen	,	
-	cesses. The subject is also the basis for producing single-crystal Si. Technology using plasma technology, packaging, and basic asse presented.	-	
B1B13TPR	Technological Project Planning	Z,ZK	5
	Management. Project Life Cycle. Project Framework. Project phases: Initial, Construct, Delivery and Support. Organizational project struct	-	-
SWOT, PEST a	nd 5F. Project logic frame. Project schedule, GANTT, PERT. Process modelling. Management of risks and knowledge. Standards and	l norms. Human re	sources
B1B13VES	management. Funding. Manufacturing of Electrical Components	Z,ZK	6
	ic components in general. Basic technology in use. Type of components: resistors, potentiometers, capacitors with foil dielectric. Cerar		-
3, 11	Electromechanical devices . Semiconductors, fabrication of vertical and horizontal structures. Packaging.	, , ,	
B1B13VVZ1	Manufacturing of Power Devices	Z,ZK	4
-	ject is focused on manufacturing of power electrical machines and devices from construction and technological point of wiev. Main particular to the second	-	
	l rotating machines, namely their magnetic circuits and windings. Second half of the subject is dedicated to manufacturing of power s ars including diagnostics, reliable operation. Last part of lectures deals with layouts of manufactirung, lean management and planning		
B1B14MIS	Microprocessors for Power Systems	Z.ZK	5
	cs control computer structure, digital signal processor and ALU added features for fast real time calculations. Interrupt system and D	,	-
	mpulse signal measurement, fast impulse generation support, inter-computer communication, system and power management, prog		
-	development, programming techniques, software development tools (simulators, emulators, monitors), input signal conditioning circu	-	-
	ocessing, time sampling, amplitude quatization, power electronics control block design and implementation, difference equations and ations, debugging methods, program parametrization, guides and rules for implementation and application of power system control c	-	
51	system, scheduler, dispatcher and another features and guides for application		
B1B14TME1	Engineering mechanics	Z,ZK	5
	s knowledge of applied mechanics for the industry practice. Analysis of constructional elements and their dimensioning. Kinematics of		-
benaviour of mecha	nical systems, mechanic vibrations. Thermodynamics of real gases and vapours, their processes an cycles, basic comparative cycles of of hydrodynamics, transport losses in hydraulic systems.	neat machines. Fu	indamentais i
B1B14ZEL1	Fundamentals of Electrotechnical Engineering		indamentais
	ds necessary knowledge of creating technical documentation, including oral and written presentation of technical information. The se	KZ	
		KZ econd half of the se	4
focused on expl	aining and practicing the basic parts of electrical engineering, so that the students' initial knowledge is increased to the level needed	econd half of the se	4 emester is
B1B14ZPO	Fundametals of Electric Drives	econd half of the so in the following se Z,ZK	4 emester is mesters. 5
B1B14ZPO The course provid	Fundametals of Electric Drives as the basic terms and knowledge in electric drives and in the issues related to this discipline as well. The lectures are focused on the	econd half of the se in the following se Z,ZK e basic of electric	4 emester is mesters. 5 drives logic
B1B14ZPO The course provid	Fundametals of Electric Drives es the basic terms and knowledge in electric drives and in the issues related to this discipline as well. The lectures are focused on the control and also discrete control, and on the characteristics of used controllers in practice. Further, the basic control structures of driv	econd half of the se in the following se Z,ZK e basic of electric	4 emester is mesters. 5 drives logic
B1B14ZPO The course provid control, continuous	Fundametals of Electric Drives as the basic terms and knowledge in electric drives and in the issues related to this discipline as well. The lectures are focused on the control and also discrete control, and on the characteristics of used controllers in practice. Further, the basic control structures of driv are explained.	cond half of the so in the following se Z,ZK e basic of electric ves with DC and A	4 emester is mesters. 5 drives logic
B1B14ZPO The course provid control, continuous B1B14ZSP	Fundametals of Electric Drives es the basic terms and knowledge in electric drives and in the issues related to this discipline as well. The lectures are focused on the control and also discrete control, and on the characteristics of used controllers in practice. Further, the basic control structures of driv	cond half of the so in the following se Z,ZK e basic of electric ves with DC and A Z,ZK	4 emester is mesters. 5 drives logic C machines 5
B1B14ZPO The course provid control, continuous B1B14ZSP The course explain non-rotating electr	Fundametals of Electric Drives as the basic terms and knowledge in electric drives and in the issues related to this discipline as well. The lectures are focused on the control and also discrete control, and on the characteristics of used controllers in practice. Further, the basic control structures of drivare explained. Electric Machines and Apparatuses Basics a the principles of machines for convertsion of mechanical energy to electrical and back. It discusses the principles of basic functions ic machines. Following the behavior of electrical machines are discussed basic devices for protection and switching, including behavior	cond half of the se in the following se Z,ZK e basic of electric ves with DC and A Z,ZK and properties of ioral and switching	4 emester is mesters. 5 drives logic C machines 5 rotating and p problems.
B1B14ZPO The course provid control, continuous B1B14ZSP The course explain non-rotating electr B1B14ZVE	Fundametals of Electric Drives as the basic terms and knowledge in electric drives and in the issues related to this discipline as well. The lectures are focused on the control and also discrete control, and on the characteristics of used controllers in practice. Further, the basic control structures of drivare explained. Electric Machines and Apparatuses Basics as the principles of machines for convertsion of mechanical energy to electrical and back. It discusses the principles of basic functions ic machines. Following the behavior of electrical machines are discussed basic devices for protection and switching, including behavior Power Electronics	cond half of the se in the following se Z,ZK e basic of electric ves with DC and A Z,ZK and properties of ioral and switching Z,ZK	4 emester is mesters. 5 drives logic C machines 5 rotating and problems. 4
B1B14ZPO The course provid control, continuous B1B14ZSP The course explain non-rotating electr B1B14ZVE	Fundametals of Electric Drives as the basic terms and knowledge in electric drives and in the issues related to this discipline as well. The lectures are focused on the control and also discrete control, and on the characteristics of used controllers in practice. Further, the basic control structures of driver are explained. Electric Machines and Apparatuses Basics as the principles of machines for convertsion of mechanical energy to electrical and back. It discusses the principles of basic functions is machines. Following the behavior of electrical machines are discussed basic devices for protection and switching, including behavior Power Electronics as on the basic types of power semiconductor converters, which are used to change the parameters of electricity. Students are introder	cond half of the se in the following se Z,ZK e basic of electric ves with DC and A Z,ZK and properties of ioral and switching Z,ZK	4 emester is mesters. 5 drives logic C machines 5 rotating and problems. 4
B1B14ZPO The course provid control, continuous B1B14ZSP The course explain non-rotating electr B1B14ZVE The course focus	Fundametals of Electric Drives as the basic terms and knowledge in electric drives and in the issues related to this discipline as well. The lectures are focused on the control and also discrete control, and on the characteristics of used controllers in practice. Further, the basic control structures of driver are explained. Electric Machines and Apparatuses Basics as the principles of machines for convertsion of mechanical energy to electrical and back. It discusses the principles of basic functions is machines. Following the behavior of electrical machines are discussed basic devices for protection and switching, including behavior of so on the basic types of power semiconductor converters, which are used to change the parameters of electricity. Students are introd properties and applications of power electronic converters, their advantages, disadvantages, and fuse sizing.	cond half of the se in the following se Z,ZK e basic of electric ves with DC and A Z,ZK and properties of ioral and switching Z,ZK duced to the basic	4 emester is mesters. 5 drives logic C machines 5 rotating and problems. 4 principles,
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B1B14ZPO The course provid control, continuous B1B14ZSP The course explain non-rotating electr B1B14ZVE The course focus B1B15EN11 B1B15EN2	Fundametals of Electric Drives es the basic terms and knowledge in electric drives and in the issues related to this discipline as well. The lectures are focused on the control and also discrete control, and on the characteristics of used controllers in practice. Further, the basic control structures of drivare explained. Electric Machines and Apparatuses Basics Is the principles of machines for convertsion of mechanical energy to electrical and back. It discusses the principles of basic functions ic machines. Following the behavior of electrical machines are discussed basic devices for protection and switching, including behavior properties and applications of power electronic converters, which are used to change the parameters of electricity. Students are introd properties and applications of power electronic converters, their advantages, disadvantages, and fuse sizing. Power Engineering 1 Power Engineering 2	cond half of the se in the following se Z,ZK e basic of electric ves with DC and A Z,ZK and properties of ioral and switching Z,ZK duced to the basic	4 emester is mesters. 5 drives logic C machines 5 rotating and problems. 4 principles,
B1B14ZPO The course provid control, continuous B1B14ZSP The course explain non-rotating electr B1B14ZVE The course focus B1B15EN11	Fundametals of Electric Drives as the basic terms and knowledge in electric drives and in the issues related to this discipline as well. The lectures are focused on the control and also discrete control, and on the characteristics of used controllers in practice. Further, the basic control structures of drivare explained. Electric Machines and Apparatuses Basics as the principles of machines for convertsion of mechanical energy to electrical and back. It discusses the principles of basic functions ic machines. Following the behavior of electrical machines are discussed basic devices for protection and switching, including behaviores on the basic types of power semiconductor converters, which are used to change the parameters of electricity. Students are introd properties and applications of power electronic converters, their advantages, disadvantages, and fuse sizing. Power Engineering 1	cond half of the se in the following se Z,ZK e basic of electric ves with DC and A Z,ZK and properties of ioral and switching Z,ZK luced to the basic Z,ZK Z,ZK	4 emester is mesters. 5 drives logic C machines 5 rotating and problems. 4 principles, 5 5
B1B14ZPO The course provid control, continuous B1B14ZSP The course explain non-rotating electr B1B14ZVE The course focus B1B15EN11 B1B15EN2 B1B15EN3	Fundametals of Electric Drives es the basic terms and knowledge in electric drives and in the issues related to this discipline as well. The lectures are focused on the control and also discrete control, and on the characteristics of used controllers in practice. Further, the basic control structures of drivare explained. Electric Machines and Apparatuses Basics Is the principles of machines for convertsion of mechanical energy to electrical and back. It discusses the principles of basic functions is machines. Following the behavior of electrical machines are discussed basic devices for protection and switching, including behavior of power Electronics es on the basic types of power semiconductor converters, which are used to change the parameters of electricity. Students are introd properties and applications of power electronic converters, their advantages, disadvantages, and fuse sizing. Power Engineering 1 Power Engineering 2 Power Engineering 3	cond half of the se in the following se Z,ZK e basic of electric ves with DC and A Z,ZK and properties of ioral and switching Z,ZK luced to the basic Z,ZK Z,ZK KZ	4 emester is mesters. 5 drives logic C machines 5 rotating and problems. 4 principles, 5 5 4
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in DC circuits and in sinusoidal steady state as well as transients, caused by changes in the circuit. Acquired knowledge should, among other things, also be used for critical assessment of the results of the analysis and simulation of electrical circuits by means of software tools.

	of the results of the analysis and simulation of electrical circuits by means of software tools.		
B1B34EPS	Elektronics for Heavy-current engeneering	KZ	4
Knowledge of cur	rent basic passive and active electronic components. Structure, physical and circuit properties of components. Component behavior	when working with	both small
and large analog	, digital and optical signals. More complex circuit systems and communication technologies. Measuring the most important applicatio	ns of modern sem	iconductor
	devices.		
B1B38EMA	Electrical Measurements	KZ	5
The subject is for	used to fundamentals of measurement and instrumentation. Based on the principle of the methods of electrical quantities measurem	nent (voltage, curre	ent, power,
frequency, resistan	ce, capacitance and inductance) a structure and properties of measuring instruments are explained including principles of their corre	ct application and	an accuracy
	estimation. Fundamentals of magnetic measurements close the course.		
B1BPROJ4	Bachelor project	Z	4
BBAP15	Bachelor thesis	Z	15
BEZB	Safety in Electrical Engineering for a bachelor's degree	Z	0
The purpose of the	safety course is to give the students basic knowledge of electrical equipment and installation as to avoid danger arising from operatio	n of it. This introdu	ctory course
contains funda	amentals of Safety Electrical Engineering. In this way the students receive qualification of instructed person that enables them to wor	k on electrical equ	ipment.
BEZZ	Basic health and occupational safety regulations	Z	0
The guidelines wer	e worked out based on The Training Scheme for Health and Occupational Safety designed for employees and students of the Czech	Technical Universit	y in Prague,
which was provide	d by the Rector's Office of the CTU. Safety is considered one of the basic duties of all employees and students. The knowledge of He	ealth and Occupat	ional Safety
	regulations forms an integral and permanent part of qualification requirements. This program is obligatory.		
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 <u>http://bilakniha.cvut.cz/en/f3.html</u> Generated: day 2024-07-27, time 05:33.