Study plan

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

Faculty/Institute/Others: Faculty of Electrical Engineering

Department:

Branch of study guaranteed by the department: Welcome page

Garantor of the study branch:

Program of study: Electrical Engineering, Power Engineering and Management

Type of study: Bachelor full-time

Required credits: 178
Elective courses credits: 2
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

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

		_	 •		
BBAP15	Bachelor thesis			Z	15

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	Р
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	Р

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	ty course is to give the students basic knowledge of electrical equipment and installation as to avoid danger arising from oper	ation of it. This intr	oductory course
contains fundamentals	of Safety Electrical Engineering. In this way the students receive qualification of instructed person that enables them to work	on electrical equip	pment.
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 group:

Note on the gro	•	Y				
Code	Name of the course / Name of the group of courses (in case of groups of courses the list of codes of their	Completion	Credits	Scope	Semester	Role
	members) Tutors, authors and guarantors (gar.)					
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.)	KZ	5	2P+2L	L	Р
B1B31EOS	Electric circuits Martin Pokorný, Michal Šimek Martin Pokorný Martin Pokorný (Gar.)	Z,ZK	6	3P+2S	Z	Р
B1B15EN11	Power Engineering 1 Ivo Doležel, Zden k Müller, Ladislav Musil	Z,ZK	5	3P+2S	L	Р
B1B15EN2	Power Engineering 2 Ivo Doležel, Zden k Müller	Z,ZK	5	2P+2L	Z	Р
B1B17EMP	Electromagnetic Field 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.)	KZ	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 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	Р
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	Р
B0B01MA1A	Mathematical Analysis 1 Josef Dvo ák, Karel Pospíšil, Veronika Sobotíková Veronika Sobotíková Veronika Sobotíková (Gar.)	Z,ZK	6	4P+2S	Z	Р
B0B01MA2A	Mathematical Analysis 2 Karel Pospíšil, Zden k Mihula, Martin Bohata, Veronika Sobotíková, Jaroslav Tišer, Martin K epela Jaroslav Tišer Petr Hájek (Gar.)	Z,ZK	6	4P+2S	L	Р
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 Stanislav Vítek (Gar.)	KZ	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	Р
B1B13PPS	Industrial computer systems 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	Р
B1B15VYA	Computational Applications Jan Kyncl Jan Kyncl (Gar.)	KZ	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	Р
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	KZ	4	2P+2C	Z	Р
B1B14ZVE	Power Electronics Jan Bauer, Jií Lettl Jií 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.

D./D005144		147	
B1B38EMA	Electrical Measurements	KZ	5
-	to fundamentals of measurement and instrumentation. Based on the principle of the methods of electrical quantities measure apacitance and inductance) a structure and properties of measuring instruments are explained including principles of their co		
•	apacitance and inductance) a structure and properties of measuring instruments are explained including principles of their ocals of magnetic measurements close the course.	пест аррисацоп а	and an accuracy
B1B31EOS	Electric circuits	Z,ZK	6
	undamental methods of electrical circuit analysis. The aim is to unify different level of knowledge of students coming from sch	<i>'</i>	
-	edge necessary for next subjects. It presents the difference among physical circuit and its models, and then it presents the behavior		- 1
	usoidal steady state as well as transients, caused by changes in the circuit. Acquired knowledge should, among other things, al		
of the results of the ana	lysis and simulation of electrical circuits by means of software tools.		
B1B15EN11	Power Engineering 1	Z,ZK	5
B1B15EN2	Power Engineering 2	Z,ZK	5
B1B17EMP	Electromagnetic Field	Z,ZK	5
	dents acquinted with principles and applied electromagnetic field theory basics.	_, ,	
B1B34EPS	Elektronics for Heavy-current engeneering	KZ	4
	asic passive and active electronic components. Structure, physical and circuit properties of components. Component behavio	l l	ith both small
and large analog, digital	I and optical signals. More complex circuit systems and communication technologies. Measuring the most important applicati	ons of modern se	miconductor
devices.			
B1B02FY1	Physics 1	Z,ZK	8
	rsics at the Faculty of Electrical Engineering - Physics 1, is devoted to the introduction into two important areas of physics. The		
	ne electric and magnetic field. Within the framework of the classical mechanics, the students study the particle kinematics; dynamics		
	gid bodies. The students should be able to solve basic problems dealing with the description of mechanical systems, which the	-	-
	echanics is followed by the relativistic mechanics, electric and magnetic field - both stationary as well as non-stationary. The		ŭ
consecutive course Phy	dy of electrical circuits, theory of electrotechnical materials or radioelectronics. Apart of this, the knowledge gained in this cou	rse is required for	the study of the
		7 7V	7
B1B02FY2	Physics 2	Z,ZK	
· · · · · · · · · · · · · · · · · · ·	closely linked with the course Physics 1. Within the framework of this course the students will first of all learn foundations of will give to the students basic insight into the properties of waves and will help to the students to understand that the presente	-	
=	pite of the waves character. Particular types of waves, such as acoustic or optical waves are the subjects of the following sect	•	
-	plete the student?s general education in physics. The knowledge gained in this course will help to the students in study of su		
	Iring technique and will allow them to understand the principles of novel technologies and functioning of new electronic device		,
B0B01KANA	Complex Analysis	Z,ZK	4
B0B01LAGA	Linear Algebra	Z,ZK	7
B0B01MA1A	Mathematical Analysis 1	Z,ZK	6
	course to differential and integral calculus of functions of one real variable.	۷,۷۱۲	0
B0B01MA2A	Mathematical Analysis 2	Z,ZK	6
	ntroduction to the differential and integral calculus in several variables and basic relations between curve and surface integral	· .	-
-	s with application to Taylor and Fourier series.	or ourser pair corn	
B1B13MVE1	Materials for Power Electrical Engineering	Z,ZK	4
	iption of basic properties and basic types of materials for electrical engineering is carried out. Types of conductors, supercond		
	fuctors, which are used in power electrical engineering, are presented. The stress is put on relationships between properties,		-
student will meet, in high	her detail, with ceramics for electrical engineering, with properties of mica, glass and their applications, with environmental c	onductive joining,	with materials
for thin and thick films a	nd with selected nanomaterials and their applications.		
B0B99PRPA	Procedural Programming	KZ	4
B1BPROJ4	Bachelor project	Z	4
B1B13PPS	Industrial computer systems	Z,ZK	4
The subject is focused of	on basic knowledges about computer control systems used in electrotechnic engineering and energetics. Students works with		a acquisition and
data processing, softwa	re tools and application examples. There are presented elementary digital circuits, the representation of numbers and their p	rocessing in micro	ocomputer and
fundamental block of mi	icroprocessor and microcomputer. The single chip microcomputer, embedded application, industrial PC and design to industr	ial condition are p	resented.
B1B13TEP	Electrical engineering technological processes	Z,ZK	4
Technologies used in el	ectronics, laser, and other beam technologies and IC packaging will be characterized. There will also be discussed fundamen	ntals of winding, d	rying and
· -	s. The subject is also the basis for producing single-crystal Si. Technology using plasma technology, packaging, and basic ass	embly technologi	es are also
presented.			
B1B15VYA	Computational Applications	KZ	4
B1B13VVZ1	Manufacturing of Power Devices	Z,ZK	4
	is focused on manufacturing of power electrical machines and devices from construction and technological point of wiev. Ma		
	ng machines, namely their magnetic circuits and windings. Second half of the subject is dedicated to manufacturing of power		evices and
	gnostics, reliable operation. Last part of lectures deals with layouts of manufactirung, lean management and planning of mar		_
B1B14ZPO	Fundametals of Electric Drives	Z,ZK	5
•	e basic terms and knowledge in electric drives and in the issues related to this discipline as well. The lectures are focused on		- 1
are explained.	trol and also discrete control, and on the characteristics of used controllers in practice. Further, the basic control structures of	drives with DC ai	nd AC machines
	Floatric Machines and Apparatuses Region	7 71/	5
B1B14ZSP	Electric Machines and Apparatuses Basics principles of machines for convertsion of mechanical energy to electrical and back. It discusses the principles of basic functi	Z,ZK	-
· · · · · · · · · · · · · · · · · · ·	chines. Following the behavior of electrical machines are discussed basic devices for protection and switching, including beh		- 1
B1B14ZEL1	Fundamentals of Electrotechnical Engineering	KZ	4
	persary knowledge of creating technical documentation, including oral and written presentation of technical information. The		-
	nd practicing the basic parts of electrical engineering, so that the students' initial knowledge is increased to the level needed		
B1B14ZVE	Power Electronics	Z,ZK	4
	the basic types of power semiconductor converters, which are used to change the parameters of electricity. Students are intri		
	ons of power electronic converters, their advantages, disadvantages, and fuse sizing.		,

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	Completion	Credits	Scope	Semester	Role
	members) Tutors, authors and guarantors (gar.)			•		
B0B04B1K	English language B1 - classified assessment Markéta Havlí ková, Pavla Péterová, Erik Peter Stadnik, Michael Ynsua, Dana Saláková, Petra Jennings Petra Jennings (Gar.)	KZ	0	0C	Z,L	Р
B0B04B2Z	English language B2 - exam Michael Ynsua, Dana Saláková, Petra Jennings Petra Jennings (Gar.)	Z,ZK	0	0C	Z,L	Р

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

		<u> </u>	
B0B04B1K	English language B1 - classified assessment	KZ	0
verifying of the studen	r's skills of B1 level		
B0B04B2Z	English language B2 - exam	Z.ZK	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: 36

The role of the block: PZ

Code of the group: 2018 BEEMPS2

Name of the group: Compulsory subjects of the branch

Requirement credits in the group: In this group you have to gain 36 credits

Requirement courses in the group: In this group you have to complete 7 courses

Credits in the group: 36

Note on the group:

Specializace - elektrotechnika a management

ivote on the group). Opedializade - cientroted	ililika a iliali	agemen			
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
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
B1B01MEK	Mathematics for Economy Veronika Sobotíková, Kate ina Helisová, Jakub Stan k, Miroslav Korbelá Kate ina Helisová (Gar.)	Z,ZK	5	3P+2S	L	PZ
B1B16PPP	Business Law Jaroslav Knápek, Michal Briaský, Pavel Košál, Martin Dobiáš Martin Dobiáš Jaroslav Knápek (Gar.)	Z,ZK	5	2P+2C	L	PZ
B1B16UEE1	Economy of Power Industry Ji í Vaší ek, Miroslav Vítek, Jaroslav Knápek Miroslav Vítek Jaroslav Knápek (Gar.)	Z,ZK	5	2P+2C	Z	PZ
B1B13VEZ	Manufacturing of Electronic Equipment David Bušek, Jan Urbánek David Bušek David Bušek (Gar.)	Z,ZK	6	2P+2L	L	PZ
B1B16ZFM1	Basics of Financial Management Josef ernohous, Blanka Ku erková, Old ich Starý Old ich Starý Old ich Starý (Gar.)	Z,ZK	5	2P+2C	L	PZ
B1B16ZPU	Basics of Business Economics Josef ernohous, Blanka Ku erková, Old ich Starý Josef ernohous Old ich Starý (Gar.)	KZ	5	2P+2C	Z	PZ

Characteristics of the courses of this group of Study Plan: Code=2018 BEEMPS2 Name=Compulsory subjects of the branch

B1B16MME	Macro and Microekonomics	Z,ZK	5
Basic economic terms, r	narket, law of demand, law of supply, market equilibrium, price regulation, price and income elasticities, consumer's behavior, price and income elasticities, consumer's behavior, price regulation, price regulation, price and income elasticities, consumer's behavior, price regulation and	producer's behavio	or, cost, revenue,
profit, market failure, mo	propoly, government macroeconomic policy, gross domestic product, multipliers, money, inflation, banking system, monetary	policy, labor mark	ket, business
cycle, fiscal policy, foreig	gn trade policy, comparative advantage, CR and EU, Euro.		
B1B01MEK	Mathematics for Economy	Z,ZK	5
The aim is to introduce	the basic theory of probability and statistics, familiarise students with basic terms properties and methods used in working w	ith random proces	sses, especially
with Markov chains, and	show applications of these mathematical tools in economics and insurance. At the end of the course, basic procedures of c	luster analysis wil	I be presented.
B1B16PPP	Business Law	Z,ZK	5
B1B16UEE1	Economy of Power Industry	Z,ZK	5
B1B13VEZ	Manufacturing of Electronic Equipment	Z,ZK	6
(obsolete text, currently	valid is czech version) Mechanical and electrical design. The electric contact. Joining of conductors. Cooling of components	and equipment. P	rinted circuit
boards fabrication. Sold	ering in electronics. Electromagnetic compatibility of electronic equipment. Protection of components and equipment sensitive	on electrostatic fie	eld. Certification,
accreditation, quality co	ntrol and quality assurance.		
B1B16ZFM1	Basics of Financial Management	Z,ZK	5
B1B16ZPU	Basics of Business Economics	KZ	5

Name of the block: Compulsory elective courses

Minimal number of credits of the block: 9

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 gi	roup.					
Code	Name of the course / Name of the group of courses (in case of groups of courses the list of codes of their members)	Completion	Credits	Scope	Semester	Role
	Tutors, authors and guarantors (gar.)				<u> </u>	
B0B16ET1	Ethic 1 Vladimír Sláme ka Vladimír Sláme ka Vladimír Sláme ka (Gar.)	KZ	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 (Gar.)	Z,ZK	4	2P+2S	Z,L	PV
B0B16MPL	Psychology for managers 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

B0B16ET1	Ethic 1	KZ	4
Aim of this subject i	to provide the students an orientation not only in general problems of ethics but above all to offer instructions for solving variou	s situations of hum	an life. Essentia
parts of the subject	are discussions in which students can react to lectures but also to actual questions coming with news and look for the commur	nal answers.	
B0B16FIL	Philosophy	ZK	2
We deal with the m	ist important persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of phil	osophy and connec	ction of old
philosophical thoug	its with recent problems of science, technology, economics and politics.		
B0B16FI1	Philosophy 1	KZ	4
We deal with the m	ist important persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of phil	osophy and connec	ction of old
philosophical thoug	its with recent problems of science, technology, economics and politics.		
B0B16HTE	History of technology and economic	ZK	
DODIGITE	Thistory of teermology and economic	ZIX	2
	History of science and technology 1	KZ	2 4
B0B16HT1 B0B16HI1		+	2 4 4
B0B16HT1	History of science and technology 1	KZ	
B0B16HT1 B0B16HI1	History of science and technology 1 History 1	KZ KZ	4

Code of the group: 2018_BEEMPV2

Name of the group: Compulsory subjects of the programm

Requirement credits in the group: In this group you have to gain 5 credits

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

Credits in the group: 5

Note on the group:

Specializace - Elektrotechnika a management

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
B1B16EOB	Lightning protection economy Jan Mikeš Jan Mikeš Jan Mikeš (Gar.)	Z,ZK	5	2P+2L	L	PV
B1B13SSE1	Solar Systems and Electrochemical Sources Pavel Hrzina, Vít zslav Benda Pavel Hrzina Vít zslav Benda (Gar.)	Z,ZK	5	2P+2L	L	PV

Characteristics of the courses of this group of Study Plan: Code=2018_BEEMPV2 Name=Compulsory subjects of the programm

B1B16EOB | Lightning protection economy | Z,ZK | 5
The subject provides an introduction to lightning discharge physics and deals with protections against their effects. Students are familiarized with the design, testing, and implementation of protections. Risk management methods for lightning damage are discussed. The course includes an excursion to the production of lightning current arresters and a real study of the effects of lightning currents in the laboratory supported by numerical simulations.

B1B13SSE1 Solar Systems and Electrochemical Sources

Z,ZK

The course familiarizes students with the basic principles of electrochemical sources and photovoltaic cells and systems. At the beginning, the emphasis is on understanding the basic principle using the equivalent circuits and mathematical description. In the next section, the basic types of electrochemical sources and their technical parameters are explored separately. Similarly, students become 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 become familiar with economical and technological implications of the combination of solar systems and electrochemical sources.

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:

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 Jennings Petra Jennings (Gar.)	Z	0	2C	Z	V
B0B04B12	English Language B1-2 Petra Jennings Petra Jennings (Gar.)	Z	0	2C	L	V
B0B04B21	English Language B2-1 Petra Jennings Petra Jennings (Gar.)	Z	3	2C	Z	V
B0B04B22	English Language B2-2 Petra Jennings Petra 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	The course is open to students 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 s	tudents who are beginners in their second foreign language. The course objective is to develop and sustain their basic knowl	edge of the Engli	sh language.					
B0B04B11	English Language B1-1	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.								
B0B04B12	English Language B1-2	Z	0					
Course objective: Broad	Course objective: Broadening the basic knowledge of general English; mastering basic specialised language; focusing on text analysis and vocabulary expansion; understanding spoken							
English.	English.							
B0B04B21	English Language B2-1	Z	3					
1		DO 1 *1 DO	DO 4DO 7+\ \A# 'I					

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.

B0B04B22 English Language B2-2

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 - 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.

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	Ζ	2

		7 71/	4
	Differencial Equations and Numerical Analysis	Z,ZK	4
L	ces students to the classical theory of ordinary differential equations (separable and linear ODEs) and also to bsics of numerical methods and the control of the control o		
,	I solutions of algebraic and differential equations and their systems). The course takes advantage of the synnergy between theoretical		
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	s an introduction to the differential and integral calculus in several variables and basic relations between curve and surface integrals.	Other part contain	s function
	series and power series with application to Taylor and Fourier series.		
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 E	nglish.	
B0B04A22	English Language A2-2	Z	0
	en to students who are beginners in their second foreign language. The course objective is to develop and sustain their basic knowled	dge of the English	_
B0B04B11	English Language B1-1	7	0
	roadening the basic knowledge of general English; mastering basic specialised language; focusing on text analysis and vocabulary exp	ansion: understan	_
	English.		g -p
B0B04B12	English Language B1-2	Z	0
	roadening the basic knowledge of general English; mastering basic specialised language; focusing on text analysis and vocabulary exp		
000.00 00,000.70.2	English.	anoion, andoroian	anig oponon
B0B04B1K	English language B1 - classified assessment	KZ	0
D0D04D1K	verifying of the student's skills of B1 level	NZ.	U
B0B04B21	. ,	Z	3
	English Language B2-1	_	_
-	gned as a full-year, two semester preparation course for the university's compulsory B2-level English Examination (Anglický jazyk B2-		
	ised 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 appropria:		
academic and techi	/ International Study.	te level of English	ioi Erasinus
D0D04D00	·	7	2
B0B04B22	English Language B2-2	Z	3
,	ned as a full-year, two semester preparation course for the university's compulsory B2-level English Examination (Anglický jazyk B2 -		•
	ised on helping students reach a level required to pass the B2-level English Examination (or improve their English for a higher mark),		
academic and techi	nical vocabulary and grammar expected of students at the university level. *NOTE: This exam is also used for determining an appropriate the control of the c	te level of English	ioi Erasinus
D0D04D07	/ International Study.	7.71	
B0B04B2Z	English language B2 - exam	Z,ZK	0
	xam is a compulsory subject for all Faculty of Electrical Engineering students at the Czech Technical University. According to the Stud	-	
	dents 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 achieve		-
	.can understand the main ideas of complex text on both concrete and abstract topics, including technical discussions in his/her field of the contraction with particle appealance quite possible without strain for either party. Can produce	-	
_	uency and spontaneity that makes regular interaction with native speakers quite possible without strain for either party. Can produce and explain a viewpoint on a topical issue giving the advantages and disadvantages of various options." III) Students who have succe		
	and explain a viewpoint on a topical issue giving the advantages and disadvantages of various options. In students who have succe		
IIILEITIALIOITAI EXAITI	within the past five years may present their certificate to the Department of Languages. Faculty of Electrical Engineering Upon appro	essfully passed an	approved
	within the past five years may present their certificate to the Department of Languages, Faculty of Electrical Engineering. Upon appro	essfully passed an eval, students are t	approved
DOD16ET1	from both the Written Test and the Oral Part. For a list of approved international exams go the department website: http://jazyky.fel.	essfully passed an oval, students are t .cvut.cz/	approved hen exempt
B0B16ET1	from both the Written Test and the Oral Part. For a list of approved international exams go the department website: http://jazyky.fel.	essfully passed an oval, students are t .cvut.cz/ KZ	approved hen exempt
Aim of this subject i	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 s to provide the students an orientation not only in general problems of ethics but above all to offer instructions for solving various situ	essfully passed an oval, students are t .cvut.cz/ KZ aations of human li	approved hen exempt 4 fe. Essential
Aim of this subject i	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 s to provide the students an orientation not only in general problems of ethics but above all to offer instructions for solving various situ the subject are discussions in which students can react to lectures but also to actual questions coming with news and look for the co	essfully passed an oval, students are t .cvut.cz/ KZ actions of human lif ommunal answers.	approved hen exempt 4 fe. Essential
Aim of this subject in parts of B0B16FI1	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 s to provide the students an orientation not only in general problems of ethics but above all to offer instructions for solving various situ the subject are discussions in which students can react to lectures but also to actual questions coming with news and look for the control Philosophy 1	essfully passed an oval, students are to excut.cz/ KZ eations of human life ommunal answers. KZ	approved hen exempt 4 fe. Essential
Aim of this subject in parts of B0B16FI1	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 s to provide the students an orientation not only in general problems of ethics but above all to offer instructions for solving various situ the subject are discussions in which students can react to lectures but also to actual questions coming with news and look for the company of the properties of the properties of the provided HTML representation of	essfully passed an oval, students are to excut.cz/ KZ eations of human life ommunal answers. KZ	approved hen exempt 4 fe. Essential
Aim of this subject in parts of B0B16FI1 We deal with the	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 s to provide the students an orientation not only in general problems of ethics but above all to offer instructions for solving various situ the subject are discussions in which students can react to lectures but also to actual questions coming with news and look for the complete problems of the complete problems of science, technology, economics and politics.	essfully passed an oval, students are to covut.cz/ KZ lations of human life ommunal answers. KZ ophy and connections	approved hen exempt 4 fe. Essential 4 on of old
Aim of this subject in parts of B0B16FI1 We deal with the B0B16FIL	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 s to provide the students an orientation not only in general problems of ethics but above all to offer instructions for solving various situ the subject are discussions in which students can react to lectures but also to actual questions coming with news and look for the complete problems of the complete problems of science, technology, economics and politics. Philosophy Philosophy	essfully passed an oval, students are to covut.cz/ KZ lations of human life ommunal answers. KZ ophy and connection	approved then exempt 4 fe. Essential 4 on of old
Aim of this subject in parts of B0B16FI1 We deal with the B0B16FIL	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 s to provide the students an orientation not only in general problems of ethics but above all to offer instructions for solving various situ the subject are discussions in which students can react to lectures but also to actual questions coming with news and look for the complete problems of expectations are concerned especially on transdisciplinary nature of philosophy. We are concerned especially on transdisciplinary nature of philosophy s most important persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of philosophy. Thilosophy s most important persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of philosophy.	essfully passed an oval, students are to covut.cz/ KZ lations of human life ommunal answers. KZ ophy and connection	approved then exempt 4 fe. Essential 4 on of old
Aim of this subject in parts of B0B16FI1 We deal with the B0B16FIL We deal with the	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 s to provide the students an orientation not only in general problems of ethics but above all to offer instructions for solving various situ the subject are discussions in which students can react to lectures but also to actual questions coming with news and look for the complete problems of expectations are concerned especially on transdisciplinary nature of philosophy. We are concerned especially on transdisciplinary nature of philosophy most important persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of philosophy emost important persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of philosophical thoughts with recent problems of science, technology, economics and politics.	essfully passed an aval, students are to every court.cz/ KZ lations of human life ommunal answers. KZ ophy and connection of the connect	approved hen exempt 4 fe. Essential 4 on of old 2 on of old
Aim of this subject in parts of B0B16FI1 We deal with the B0B16FIL We deal with the B0B16HI1	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 s to provide the students an orientation not only in general problems of ethics but above all to offer instructions for solving various situ the subject are discussions in which students can react to lectures but also to actual questions coming with news and look for the complete are discussions in which students can react to lectures but also to actual questions coming with news and look for the complete are discussions in which students can react to lectures but also to actual questions coming with news and look for the complete are discussions in which students can react to lectures but also to actual questions coming with news and look for the complete are discussions in which students can react to lectures but also to actual questions coming with news and look for the complete are discussions in which students can react to lectures but also to actual questions coming with news and look for the complete coming with news and look for the complete complete are discussions in which students are discussions in which students are discussions for solving with news and look for the complete complete are discussions in which students are discussions and look for the complete are discussions and politics. Philosophy e most important persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of philosophy are discussions are discussions. Philosophy e most important persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of philosophy are discussions. Philosophy e most important persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of philosophy are discuss	essfully passed an eval, students are to evout.cz/ KZ nations of human life ommunal answers. KZ ophy and connections of the connection o	approved then exempt 4 fe. Essential 4 on of old
Aim of this subject in parts of B0B16FI1 We deal with the B0B16FIL We deal with the	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 s to provide the students an orientation not only in general problems of ethics but above all to offer instructions for solving various situ the subject are discussions in which students can react to lectures but also to actual questions coming with news and look for the complete problems of expectations are concerned especially on transdisciplinary nature of philosophy. We are concerned especially on transdisciplinary nature of philosophy most important persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of philosophy emost important persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of philosophical thoughts with recent problems of science, technology, economics and politics.	essfully passed an aval, students are to every court.cz/ KZ lations of human life ommunal answers. KZ ophy and connection of the connect	approved hen exempt 4 fe. Essential 4 on of old 2 on of old
Aim of this subject in parts of B0B16FI1 We deal with the B0B16FIL We deal with the B0B16HI1	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 s to provide the students an orientation not only in general problems of ethics but above all to offer instructions for solving various situ the subject are discussions in which students can react to lectures but also to actual questions coming with news and look for the complete are discussions in which students can react to lectures but also to actual questions coming with news and look for the complete are discussions in which students can react to lectures but also to actual questions coming with news and look for the complete are discussions in which students can react to lectures but also to actual questions coming with news and look for the complete are discussions in which students can react to lectures but also to actual questions coming with news and look for the complete are discussions in which students can react to lectures but also to actual questions coming with news and look for the complete coming with news and look for the complete complete are discussions in which students are discussions in which students are discussions for solving with news and look for the complete complete are discussions in which students are discussions and look for the complete are discussions and politics. Philosophy e most important persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of philosophy are discussions are discussions. Philosophy e most important persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of philosophy are discussions. Philosophy e most important persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of philosophy are discuss	essfully passed an eval, students are to evout.cz/ KZ nations of human life ommunal answers. KZ ophy and connections of the connection o	approved hen exempt 4 fe. Essential 4 on of old 2 on of old 4
Aim of this subject parts of B0B16FI1 We deal with the B0B16FIL We deal with the B0B16HI1 B0B16HT1 B0B16HTE	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 s to provide the students an orientation not only in general problems of ethics but above all to offer instructions for solving various situ the subject are discussions in which students can react to lectures but also to actual questions coming with news and look for the complete and international exams go the department website: http://jazyky.fel. Philosophy 1 In most important persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of philosophy are most important persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of philosophical industry and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of philosophical thoughts with recent problems of science, technology, economics and politics. History 1 History of science and technology 1 History of technology and economic	essfully passed an eval, students are to evout.cz/ KZ stations of human life ommunal answers. KZ ophy and connection of the connection o	approved hen exempt 4 fe. Essential 4 on of old 2 on of old 4 4
Aim of this subject in parts of B0B16FI1 We deal with the B0B16FIL We deal with the B0B16HI1 B0B16HT1 B0B16HTE B0B16MPL	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 s to provide the students an orientation not only in general problems of ethics but above all to offer instructions for solving various situ the subject are discussions in which students can react to lectures but also to actual questions coming with news and look for the complete and important persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of philosophy and important persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of philosophy are most important persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of philosophical thoughts with recent problems of science, technology, economics and politics. History 1 History of science and technology 1 History of technology and economic Psychology for managers	essfully passed an eval, students are to evout.cz/ KZ lations of human liferammunal answers. KZ lations of human liferammunal answers. KZ lophy and connection opphy and conne	approved hen exempt 4 fe. Essential 4 on of old 2 on of old 4 4 2 2
Aim of this subject parts of B0B16FI1 We deal with the B0B16FIL We deal with the B0B16HI1 B0B16HT1 B0B16HTE B0B16MPL B0B16MPS	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 s to provide the students an orientation not only in general problems of ethics but above all to offer instructions for solving various situ the subject are discussions in which students can react to lectures but also to actual questions coming with news and look for the comphism of philosophy 1 emost important persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of philosophy emost important persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of philosophical important persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of philosophical thoughts with recent problems of science, technology, economics and politics. History 1 History of science and technology 1 History of technology and economic Psychology for managers Psychology	essfully passed an eval, students are to evout.cz/ KZ elations of human life mmunal answers. KZ ophy and connection of the connection of	approved hen exempt 4 fe. Essential 4 on of old 2 on of old 4 4 2 2 4
Aim of this subject in parts of B0B16FI1 We deal with the B0B16FIL We deal with the B0B16HI1 B0B16HT1 B0B16HTE B0B16MPL B0B16MPS B0B99PRPA	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 s to provide the students an orientation not only in general problems of ethics but above all to offer instructions for solving various situ the subject are discussions in which students can react to lectures but also to actual questions coming with news and look for the complete problems of science are concerned especially on transdisciplinary nature of philosophy. We are concerned especially on transdisciplinary nature of philosophy expected in the philosophy of the complete philosophy. We are concerned especially on transdisciplinary nature of philosophy expected in the philosophy. We are concerned especially on transdisciplinary nature of philosophical thoughts with recent problems of science, technology, economics and politics. History 1 History of science and technology 1 History of technology and economic Psychology for managers Psychology Procedural Programming	essfully passed an eval, students are to eval, students are to evout.cz/ KZ lations of human life ommunal answers. KZ ophy and connection ZK ophy and connection KZ KZ EX ZK ZK ZK ZK Z,ZK KZ	approved hen exempt 4 fe. Essential 4 on of old 2 on of old 4 4 2 2 4 4
Aim of this subject parts of B0B16FI1 We deal with the B0B16FIL We deal with the B0B16HI1 B0B16HT1 B0B16HTE B0B16MPL B0B99PRPA B1B01MEK	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 s to provide the students an orientation not only in general problems of ethics but above all to offer instructions for solving various situ the subject are discussions in which students can react to lectures but also to actual questions coming with news and look for the companies of the subject are discussions in which students can react to lectures but also to actual questions coming with news and look for the companies of the subject are discussions in which students can react to lectures but also to actual questions coming with news and look for the companies of the subject are discussions in which students can react to lectures but also to actual questions coming with news and look for the companies of the subject are discussions in which students can react to lectures but also very all to offer instructions for solving various situations in the students and look for the companies of the subject are discussions, schools and look for the companies of the subject are discussions, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of philosophy and important persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of philosophy and especially on transdisciplinary nature of philosophy and important persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of philosophy and especially on transdisciplinary nature of philosophy. History 1 History 1 History of science and technology 1 History of technology and economic Psychology 1 Procedural Programming 1 Mathematics for Economy	essfully passed an eval, students are to eval, students are to evout.cz/ KZ nations of human life ommunal answers. KZ ophy and connection KZ ophy and connection KZ KZ EX ZK ZK ZK Z,ZK KZ Z,ZK KZ Z,ZK	approved hen exempt 4 fe. Essential 4 on of old 2 on of old 4 4 2 2 4 4 5
Aim of this subject in parts of B0B16FI1 We deal with the B0B16FIL We deal with the B0B16HI1 B0B16HT1 B0B16HTE B0B16MPL B0B16MPS B0B99PRPA B1B01MEK The aim is to introd	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 s to provide the students an orientation not only in general problems of ethics but above all to offer instructions for solving various situ the subject are discussions in which students can react to lectures but also to actual questions coming with news and look for the composition of the subject are discussions in which students can react to lectures but also to actual questions coming with news and look for the composition of the subject are discussions in which students can react to lectures but also to actual questions coming with news and look for the composition of the subject are discussions in which students can react to lectures but also to actual questions coming with news and look for the composition of the subject are discussions in which students situates but also to actual questions coming with news and look for the composition of the subject are discussions in which students on actual questions coming with news and look for the composition of the subject are concerned especially on transdisciplinary nature of philosophy emost important persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of philosophy emost important persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of philosophy emost important persons, schools and politics. Philosophy History 1 History 1 History 1 History of science and technology 1 History of technology and economic Psychology Psychology Procedural Programming Mathematics for Economy Hustory of probability and statistics, familiarise students with basic terms properties and methods used in working with recent problems of ecities and programming and procedure.	essfully passed an eval, students are to eval, students are to evout.cz/ KZ nations of human life ommunal answers. KZ ophy and connection KZ KZ ophy and connection KZ KZ ZK ZK ZK Z,ZK KZ Z,ZK random processes	approved hen exempt 4 fe. Essential 4 on of old 2 on of old 4 4 2 2 4 4 5 , especially
Aim of this subject parts of B0B16FI1 We deal with the B0B16FIL We deal with the B0B16HI1 B0B16HT1 B0B16HTE B0B16MPL B0B16MPS B0B99PRPA B1B01MEK The aim is to introc with Markov chains	Ethic 1 Is to provide the students and orientation not only in general problems of ethics but above all to offer instructions for solving various situ the subject are discussions in which students can react to lectures but also to actual questions coming with news and look for the compact important persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of philosophy important persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of philosophy emost important persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of philosophy emost important persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of philosophical thoughts with recent problems of science, technology, economics and politics. History 1 History 1 History of science and technology 1 History of technology and economic Psychology for managers Psychology Procedural Programming Mathematics for Economy fuce the basic theory of probability and statistics, familiarise students with basic terms properties and methods used in working with respondence of clust show applications of these mathematical tools in economics and insurance. At the end of the course, basic procedures of clust	essfully passed an eval, students are to eval, students are to evout.cz/ KZ nations of human lifer promunal answers. KZ ophy and connection KZ EX Ophy and connection KZ EX	approved hen exempt 4 fe. Essential 4 on of old 2 on of old 4 4 2 2 4 5 , especially presented.
Aim of this subject parts of B0B16FI1 We deal with the B0B16FIL We deal with the B0B16HI1 B0B16HT1 B0B16MPL B0B16MPS B0B99PRPA B1B01MEK The aim is to introc with Markov chains B1B02FY1	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 s to provide the students an orientation not only in general problems of ethics but above all to offer instructions for solving various situ the subject are discussions in which students can react to lectures but also to actual questions coming with news and look for the company of the subject are discussions in which students can react to lectures but also to actual questions coming with news and look for the company of the subject are discussions in which students can react to lectures but also to actual questions coming with news and look for the company of the subject are discussions in which students can react to lectures but also to actual questions coming with news and look for the company of the subject are discussions in which students can react to lectures but also to actual questions coming with news and look for the company of the subject are discussions in which students can react to lectures but also to actual questions coming with news and look for the company of philosophy probability and statistics, familiarise students with basic terms properties and methods used in working with recent problems of science, technology and economy duce the basic theory of probability and statistics, familiarise students with basic terms properties and methods used in working with recent physics 1	essfully passed an eval, students are to eval, students are to evout.cz/ KZ lations of human lifer promunal answers. KZ ophy and connection KZ KZ OPHY and connection KZ KZ ZK ZK ZK ZK ZK ZZK AZ ZZX ZZK AZ ZZX ZZK AZ ZZK ZZK	approved hen exempt 4 fe. Essential 4 on of old 2 on of old 4 4 2 2 4 5 6, especially presented. 8
Aim of this subject parts of B0B16FI1 We deal with the B0B16FIL We deal with the B0B16HI1 B0B16HTE B0B16MPL B0B16MPS B0B99PRPA B1B01MEK The aim is to introc with Markov chains B1B02FY1 The basic course of	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 s to provide the students an orientation not only in general problems of ethics but above all to offer instructions for solving various situ the subject are discussions in which students can react to lectures but also to actual questions coming with news and look for the composition of the composition of the composition of the philosophy of the composition of the philosophy of the composition of the philosophical thoughts with recent problems of science, technology, economics and politics. Philosophy In most important persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of philosophical thoughts with recent problems of science, technology, economics and politics. History 1 History 1 History of science and technology 1 History of science and technology 1 History of technology and economic Psychology Procedural Programming Mathematics for Economy Juce the basic theory of probability and statistics, familiarise students with basic terms properties and methods used in working with respective to the procedure of the course, basic procedures of clust physics 1 Physics 1 Physics 1 Physics 1, is devoted to the introduction into two important areas of physics. The first	essfully passed an eval, students are to eval, students are to evut.cz/ KZ lations of human lifter promunal answers. KZ ophy and connection KZ ophy and connection KZ KZ ZK ZK ZK ZK ZK ZK ZZK standom processes let analysis will be Z,ZK stone is a classica	approved hen exempt 4 fe. Essential 4 on of old 2 on of old 4 4 2 2 4 5 , especially presented. 8 I mechanics
Aim of this subject parts of B0B16FI1 We deal with the B0B16FIL We deal with the B0B16HI1 B0B16HTE B0B16MPL B0B16MPS B0B99PRPA B1B01MEK The aim is to introcuith Markov chains B1B02FY1 The basic course of and the second one	Ethic 1 s to provide the students an orientation not only in general problems of ethics but above all to offer instructions for solving various situ the subject are discussions in which students can react to lectures but also to actual questions coming with news and look for the companies of the subject are discussions in which students can react to lectures but also to actual questions coming with news and look for the companies of the subject are discussions in which students can react to lectures but also to actual questions coming with news and look for the companies of the subject are discussions in which students can react to lectures but also to actual questions coming with news and look for the companies of the subject are discussions in which students can react to lectures but also to actual questions coming with news and look for the companies of the subject are discussions in which students are react to lectures but also to actual questions coming with news and look for the companies and look for the companies of the subject are discussions and look for the companies of the subject are discussions and look for the companies of the subject and politics. Philosophy In most important persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of philosophy and philosophy. Philosophy In most important persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of philosophy. Philosophy In most important persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of philosophy. Philosophy In most important persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of philosophy. Philosophy In most important persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of philosophy. Philosophy In most important persons, schools and ideas of ancient philosophy. We are	essfully passed an eval, students are to eva	approved hen exempt 4 fe. Essential 4 on of old 2 on of old 4 4 2 2 4 5 , especially presented. 8 I mechanics icle, system
Aim of this subject parts of B0B16FI1 We deal with the B0B16FIL We deal with the B0B16HI1 B0B16HTE B0B16MPL B0B16MPS B0B99PRPA B1B01MEK The aim is to introcuith Markov chains B1B02FY1 The basic course of and the second one of mass particles at B1B016FI B1B02FY1 The basic course of mass particles at B1B02FY1 The	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 s to provide the students an orientation not only in general problems of ethics but above all to offer instructions for solving various situ the subject are discussions in which students can react to lectures but also to actual questions coming with news and look for the composition of the subject are discussions in which students can react to lectures but also to actual questions coming with news and look for the composition of the subject are discussions in which students can react to lectures but also to actual questions coming with news and look for the composition of the subject are discussions in which students can react to lectures but also to actual questions coming with news and look for the composition of the subject are discussions in which students and look for the composition of the subject are discussions in which students and react to lectures but also to actual questions coming with news and look for the composition of the subject and look of the composition of the subject and look of the composition of the subject and look in the subject and look of the course, basic procedures of clust physics at the Faculty of Electrical Engineering - Physics 1 Thyphysics at the Faculty of Electrical Engineering - Physics 1, is devoted to the introduction into two important areas of physics. The first is the electric and magnetic field. Within the framework of the classical mechanics, the students study the particle kinematics; dynamic and rigid bodies. The students should be able to solve basic problems dealing with the description of mechanical systems, which th	essfully passed an eval, students are to eva	approved hen exempt 4 fe. Essential 4 on of old 2 on of old 4 4 2 2 4 5 , especially presented. 8 I mechanics icle, system heir further
Aim of this subject parts of B0B16FI1 We deal with the B0B16FIL We deal with the B0B16HI1 B0B16HTE B0B16MPL B0B16MPS B0B99PRPA B1B01MEK The aim is to introcuith Markov chains B1B02FY1 The basic course of and the second one of mass particles a studies. The classic studies. The classic studies are supported to the second one of mass particles a studies. The classic studies. The classic studies are supported to the second one of mass particles as studies. The classic studies. The classic studies are supported to the supported to t	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 s to provide the students an orientation not only in general problems of ethics but above all to offer instructions for solving various situs the subject are discussions in which students can react to lectures but also to actual questions coming with news and look for the company of the subject are discussions in which students can react to lectures but also to actual questions coming with news and look for the company of the subject are discussions in which students can react to lectures but also to actual questions coming with news and look for the company of the subject are discussions in which students can react to lectures but also to actual questions coming with news and look for the company of the subject are discussions in which students subject are discussions in which students can react to lectures but also to actual questions coming with news and look for the company of the subject are discussions in which students with recent problems of science, technology, economics and politics. Philosophy Philosophy History of science and technology 1 History of science and technology 1 History of technology and economic Psychology for managers Psychology Procedural Programming Mathematics for Economy Juce the basic theory of probability and statistics, familiarise students with basic terms properties and methods used in working with respect to the properties and methods used in working with respect to the introduction into two important areas of physics. The first is the electric and magnetic field. Within the framework of the classical mechanics, the students study the particle kinematics; dynamic and rigid bodies. The students should be able to solve basic problems dealing with the description of mechanical systems, which they all mechanics is followed by the relativistic mechanics, electric and magnetic field - both stationary as well as non-stationary. Th	essfully passed an eval, students are to eval, students are to evut.cz/ KZ lations of human lifter minutes and connection of the evaluation of human lifter minutes and connection of the evaluation of the evalu	approved hen exempt 4 fe. Essential 4 on of old 2 on of old 4 4 2 2 4 5 , especially presented. 8 I mechanics icle, system heir further facts gained
Aim of this subject parts of B0B16FI1 We deal with the B0B16FIL We deal with the B0B16HI1 B0B16HTE B0B16MPL B0B16MPS B0B99PRPA B1B01MEK The aim is to introcuith Markov chains B1B02FY1 The basic course of and the second one of mass particles a studies. The classic studies. The classic studies are supported to the second one of mass particles a studies. The classic studies. The classic studies are supported to the second one of mass particles as studies. The classic studies. The classic studies are supported to the supported to t	Ethic 1 s to provide the students an orientation not only in general problems of ethics but above all to offer instructions for solving various situ the subject are discussions in which students can react to lectures but also to actual questions coming with news and look for the common temperature of philosophy 1 most important persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of philosophy philosophical thoughts with recent problems of science, technology, economics and politics. Philosophy most important persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of philosophy philosophical thoughts with recent problems of science, technology, economics and politics. Philosophy most important persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of philosophical thoughts with recent problems of science, technology, economics and politics. History 1 History 1 History of science and technology 1 History of technology and economic Psychology for managers Psychology Procedural Programming Mathematics for Economy fuce the basic theory of probability and statistics, familiarise students with basic terms properties and methods used in working with respective to the second probability and statistics, familiarise students with basic terms properties and methods used in working with respective to the properties of these mathematical tools in economics and insurance. At the end of the course, basic procedures of clust physics 1 Physics 1 Physics 1 Physics 1 Physics 1 Physics at the Faculty of Electrical Engineering - Physics 1, is devoted to the introduction into two important areas of physics. The first is the electric and magnetic field. Within the framework of the classical mechanics, the students study the particle kinematics; dynamic and reigh bodies. The students should be able to solve basic problems dealing with the description of mechanical	essfully passed an eval, students are to eval, students are to evut.cz/ KZ lations of human lifter minutes and connection of the evaluation of human lifter minutes and connection of the evaluation of the evalu	approved hen exempt 4 fe. Essential 4 on of old 2 on of old 4 4 2 2 4 5 , especially presented. 8 I mechanics icle, system heir further facts gained
Aim of this subject parts of parts of B0B16FI1 We deal with the B0B16FIL We deal with the B0B16HI1 B0B16HT1 B0B16HTE B0B16MPL B0B16MPS B0B99PRPA B1B01MEK The aim is to introdwith Markov chains B1B02FY1 The basic course of and the second one of mass particles a studies. The classic in this course in the	from both the Written Test and the Oral Part. For a list of approved international exams go the department website: http://jazykyf.el. Ethic 1 s to provide the students an orientation not only in general problems of ethics but above all to offer instructions for solving various situ the subject are discussions in which students can react to lectures but also to actual questions coming with news and look for the composition of the students of the students of the composition of the students of the students are concerned especially on transdisciplinary nature of philosophy. We are concerned especially on transdisciplinary nature of philosophy emost important persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of philosophy emost important persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of philosophy philosophical thoughts with recent problems of science, technology, economics and politics. Philosophy History 1 History of science and technology 1 History of technology and economic Psychology Procedural Programming Mathematics for Economy duce the basic theory of probability and statistics, familiarise students with basic terms properties and methods used in working with rest, and show applications of these mathematical tools in economics and insurance. At the end of the course, basic procedures of clust Physics 1 If physics at the Faculty of Electrical Engineering - Physics 1, is devoted to the introduction into two important areas of physics. The first is the electric and magnetic field. Within the framework of the classical mechanics, the students study the particle kinematics; dynamic and rigid bodies. The students should be able to solve basic problems dealing with the description of mechanical systems, which they all mechanics is followed by the relativistic mechanics, electric and magnetic field - both stationary as well as non-stationary. The study of electrical circuits, theory of elect	essfully passed an eval, students are to eval, students are to evout.cz/ KZ lations of human life mmunal answers. KZ lophy and connection of the evaluation of the evaluatio	approved hen exempt 4 fe. Essential 4 on of old 2 on of old 4 4 2 2 4 5 , especially presented. 8 I mechanics icle, system heir further facts gained study of the
Aim of this subject parts of B0B16FI1 We deal with the B0B16FIL We deal with the B0B16HI1 B0B16HT1 B0B16HTE B0B16MPL B0B16MPS B0B99PRPA B1B01MEK The aim is to introdwith Markov chains B1B02FY1 The basic course of and the second one of mass particles a studies. The classic in this course in the B1B02FY2	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 s to provide the students an orientation not only in general problems of ethics but above all to offer instructions for solving various situ the subject are discussions in which students can react to lectures but also to actual questions coming with news and look for the converse of the students are also as a concerned especially on transdisciplinary nature of philosophy. We are concerned especially on transdisciplinary nature of philosophy and important persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of philosophy are most important persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of philosophy are most important persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of philosophy are considered to the secondary of philosophical thoughts with recent problems of science, technology, economics and politics. History 1 History 1 History of science and technology 1 History of technology and economic Psychology for managers Psychology Procedural Programming Mathematics for Economy duce the basic theory of probability and statistics, familiarise students with basic terms properties and methods used in working with respective to the secondary of the course, basic procedures of clust physics 1 physics 1 physics 1 physics 1 physics 2 Physics 2 Physics 2 Physics 2 Physics 2 Physics 2	essfully passed an eval, students are to eval, students are to evut.cz/ KZ lations of human lifter minutes and connection of the evaluation of human lifter minutes and connection of the evaluation of the evalu	approved hen exempt 4 fe. Essential 4 on of old 2 on of old 4 4 2 2 4 5 , especially presented. 8 Il mechanics icle, system heir further facts gained study of the
Aim of this subject parts of parts of B0B16FI1 We deal with the B0B16FIL We deal with the B0B16HI1 B0B16HT1 B0B16HTE B0B16MPL B0B16MPS B0B99PRPA B1B01MEK The aim is to introdwith Markov chains B1B02FY1 The basic course of and the second one of mass particles a studies. The classic in this course in the B1B02FY2 The course Physical	from both the Written Test and the Oral Part. For a list of approved international exams go the department website: http://jazykyf.el. Ethic 1 s to provide the students an orientation not only in general problems of ethics but above all to offer instructions for solving various situ the subject are discussions in which students can react to lectures but also to actual questions coming with news and look for the composition of the students of the students of the composition of the students of the students are concerned especially on transdisciplinary nature of philosophy. We are concerned especially on transdisciplinary nature of philosophy emost important persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of philosophy emost important persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of philosophy philosophical thoughts with recent problems of science, technology, economics and politics. Philosophy History 1 History of science and technology 1 History of technology and economic Psychology Procedural Programming Mathematics for Economy duce the basic theory of probability and statistics, familiarise students with basic terms properties and methods used in working with rest, and show applications of these mathematical tools in economics and insurance. At the end of the course, basic procedures of clust Physics 1 If physics at the Faculty of Electrical Engineering - Physics 1, is devoted to the introduction into two important areas of physics. The first is the electric and magnetic field. Within the framework of the classical mechanics, the students study the particle kinematics; dynamic and rigid bodies. The students should be able to solve basic problems dealing with the description of mechanical systems, which they all mechanics is followed by the relativistic mechanics, electric and magnetic field - both stationary as well as non-stationary. The study of electrical circuits, theory of elect	essfully passed an eval, students are to eval, students are to evut.cz/ KZ lations of human lifter minumal answers. KZ ophy and connection KZ ophy and connection KZ KZ ZK ZK ZK ZK ZK ZK ZXK standom processes the ranalysis will be a classical as of the mass part can meet during to dents can use the first required for the control of	approved hen exempt 4 fe. Essential 4 on of old 2 on of old 4 4 2 2 4 5 , especially presented. 8 Il mechanics icle, system heir further facts gained study of the 7 owing topic

universal character in spite of the waves character. Particular types of waves, such as acoustic or optical waves are the subjects of the following section. Quantum mechanics and 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 Materials for Power Electrical Engineering At first a physical description of basic properties and basic types of materials for electrical engineering is carried out. Types of conductors, superconductors, insulators, magnetic materials and semiconductors, which are used in power electrical engineering, are presented. The stress is put on relationships between properties, technology and the use. The student will meet, in higher detail, with ceramics for electrical engineering, with properties of mica, glass and their applications, with environmental conductive joining, with materials for thin and thick films and with selected nanomaterials and their applications. B1B13PPS Industrial computer systems The subject is focused on basic knowledges about computer control systems used in electrotechnic engineering and energetics. Students works with hardware for data acquisition and data processing, software tools and application examples. There are presented elementary digital circuits, the representation of numbers and their processing in microcomputer and fundamental block of microprocessor and microcomputer. The single chip microcomputer, embedded application, industrial PC and design to industrial condition are presented. Solar Systems and Electrochemical Sources B1B13SSE1 7.7K The course familiarizes students with the basic principles of electrochemical sources and photovoltaic cells and systems. At the beginning, the emphasis is on understanding the basic principle using the equivalent circuits and mathematical description. In the next section, the basic types of electrochemical sources and their technical parameters are explored separately. Similarly, students become 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 become familiar with economical and technological implications of the combination of solar systems and electrochemical sources. B1B13TEP Electrical engineering technological processes Z.ZK 4 Technologies used in electronics, laser, and other beam technologies and IC packaging will be characterized. There will also be discussed fundamentals of winding, drying and impregnation processes. The subject is also the basis for producing single-crystal Si. Technology using plasma technology, packaging, and basic assembly technologies are also presented. B1B13VEZ Manufacturing of Electronic Equipment (obsolete text, currently valid is czech version) Mechanical and electrical design. The electric contact. Joining of conductors. Cooling of components and equipment. Printed circuit boards fabrication. Soldering in electronics. Electromagnetic compatibility of electronic equipment. Protection of components and equipment sensitive on electrostatic field. Certification, accreditation, quality control and quality assurance. B1B13VVZ1 Manufacturing of Power Devices The topic of the subject is focused on manufacturing of power electrical machines and devices from construction and technological point of wiev. Main part of the subject is devoted to transformers and rotating machines, namely their magnetic circuits and windings. Second half of the subject is dedicated to manufacturing of power semiconductive devices and converters including diagnostics, reliable operation. Last part of lectures deals with layouts of manufactirung, lean management and planning of manufacturing. Fundamentals of Electrotechnical Engineering B1B14ZEL1 The course extends necessary knowledge of creating technical documentation, including oral and written presentation of technical information. The second half of the semester is focused on explaining and practicing the basic parts of electrical engineering, so that the students' initial knowledge is increased to the level needed in the following semesters B1B14ZPO Fundametals of Electric Drives The course provides the basic terms and knowledge in electric drives and in the issues related to this discipline as well. The lectures are focused on the basic of electric drives logic control, continuous control and also discrete control, and on the characteristics of used controllers in practice. Further, the basic control structures of drives with DC and AC machines are explained. B1B14ZSP Electric Machines and Apparatuses Basics Z,ZK The course explains the principles of machines for convertsion of mechanical energy to electrical and back. It discusses the principles of basic functions and properties of rotating and non-rotating electric machines. Following the behavior of electrical machines are discussed basic devices for protection and switching, including behavioral and switching problems. Power Electronics The course focuses on the basic types of power semiconductor converters, which are used to change the parameters of electricity. Students are introduced to the basic principles, properties and applications of power electronic converters, their advantages, disadvantages, and fuse sizing. B1B15EN11 Power Engineering 1 Z,ZK 5 B1B15EN2 Power Engineering 2 Z,ZK 5 ΚZ B1B15VYA Computational Applications 4 Z.ZK B1B16F0B Lightning protection economy The subject provides an introduction to lightning discharge physics and deals with protections against their effects. Students are familiarized with the design, testing, and implementation of protections. Risk management methods for lightning damage are discussed. The course includes an excursion to the production of lightning current arresters and a real study of the effects of lightning currents in the laboratory supported by numerical simulations. B1B16MME Macro and Microekonomics Z.ZK 5 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, foreign trade policy, comparative advantage, CR and EU, Euro. B1B16PPP **Business Law** Z.ZK 5 **B1B16UEE1** Z.ZK Economy of Power Industry 5 B1B16ZFM1 Z,ZK Basics of Financial Management 5 B1B16ZPU Basics of Business Economics ΚZ 5 B1B17EMP Electromagnetic Field Z,ZK 5 This course gets its students acquinted with principles and applied electromagnetic field theory basics. B1B31EOS Z,ZK Electric circuits 6 The subject describes fundamental methods of electrical circuit analysis. The aim is to unify different level of knowledge of students coming from schools of different categories and form the basis of knowledge necessary for next subjects. It presents the difference among physical circuit and its models, and then it presents the behavior of basic ideal circuit elements 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. B1B34EPS Elektronics for Heavy-current engeneering K7

Knowledge of current 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 applications of modern semiconductor

B1B38EMA	Electrical Measurements	KZ	5					
The subject is foo	used to fundamentals of measurement and instrumentation. Based on the principle of the methods of electrical quantities measurem	nent (voltage, curre	ent, 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.							
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 operation	n of it. This introduc	ctory course					
contains funda	amentals of Safety Electrical Engineering. In this way the students receive qualification of instructed person that enables them to worl	k on electrical equi	ipment.					
BEZZ	Basic health and occupational safety regulations	Z	0					
The guidelines were	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 Occupati	onal 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 http://bilakniha.cvut.cz/en/f3.html Generated: day 2024-05-17, time 04:57.