Study plan

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

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: Follow-up master full-time

Required credits: 116 Elective courses credits: 4 Sum of credits in the plan: 120

Note on the plan:

Name of the block: Compulsory courses in the program

Minimal number of credits of the block: 56

The role of the block: P

Code of the group: 2018_MEEMEP

Name of the group: Compulsory subjects of the programme

Requirement credits in the group: In this group you have to gain 31 credits

Requirement courses in the group: In this group you have to complete 6 courses

Credits in the group: 31 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
BE1M16EKE1	Economy of Power Industry Tomáš Králík, Július Bemš Tomáš Králík Tomáš Králík (Gar.)	Z,ZK	5	2P+2S	L	Р
BE1M15PPE1	Elements and Operation of Electrical Power Systems Ghaeth Fandi, Zden k Müller Zden k Müller (Gar.)	Z,ZK	5	2P+2S	Z	Р
BE1M15IAP	Engineering Applications Jan Kyncl, Ladislav Musil	Z,ZK	5	2P+2C	Z	Р
BE1MPROJ	Individual project Ji í Vaší ek, Zden k Müller, Jan Kyncl, Jan Jandera, Josef ernohous Josef ernohous Jan Jandera (Gar.)	Z	5	0p+4s	Z	Р
BE1M14SSE	Machinery and Structures of Power Plants Evžen Thöndel Evžen Thöndel	Z,ZK	5	2P+2C	Z	Р
BE1M13JAS1	Quality and Reliability Pavel Mach, Martin Molhanec Pavel Mach Pavel Mach (Gar.)	Z,ZK	6	2P+2C	Z,L	Р

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

Characteristics of the courses of this group of Study Plan: Code=2018_MEEMEP Name=Compulsory subjects of the programme							
BE1M16EKE1	Economy of Power Industry	Z,ZK	5				
Fundamentals of financing of power companies. Cost structure of power generation and distribution. Prices and tariff systems for power, heat and gas production and distribution.							
Examples of economic	Examples of economic evaluation and investment appraisal of the typical project in power sector. Renewable energy sources, externalities. Energy policy and energy law in CR.						
Liberalization and power	er market development.						
BE1M15PPE1	Elements and Operation of Electrical Power Systems	Z,ZK	5				
The course introduces I	basic technical principles of electricity transmission and distribution. There are explained parameters of power systems key el	lements, steady s	tates, transient				
and failure phenomena	, main principles of dimensioning and protecting, power quality and its control and electrical machines characteristics and util	ization.					
BE1M15IAP	Engineering Applications	Z,ZK	5				
The aim of the course is	s to get an overview of solving basic mathematical problems occurring in engineering practice using computer algebra system	ns					
BE1MPROJ	Individual project	Z	5				
Independent work in the	e form of a project. A student will choose a topic from a list of topics specified by branch department. The project will be defer	nded within the fra	mework of a				
subject.							
BE1M14SSE	Machinery and Structures of Power Plants	Z,ZK	5				
The aim of the course is	to acquaint students with forms of energy transformation in power plants, describing the function of power facilities, their structu	ure, properties and	d characteristics.				
BE1M13JAS1	Quality and Reliability	Z,ZK	6				
Terminology and definit	ions from the area of quality and reliability and their control, philosophy of quality, systems of quality control in the world. Relia	ability as a part of	quality. Basic				
definitions from the area of reliability, basic distributions used in reliability and their basic characteristics. Back-up using a warm and cold standby, types of warm and cold standbys.							
Reliability of components and systems, calculation of reliability using composition and decomposition. and using a method of a list. Basic statistical methods and tools joined with quality							
control, managerial tool	control, managerial tools for quality control. Techniques FMEA and QFFD, house of quality. Capability of a process. Taguchi loss function. Audits. Statistical inspection.						

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

Requirement credits in the group: In this group you have to gain 25 credits

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

Credits in the group: 25 Note on the group:

	Name of the course / Name of the group of courses (in case of groups of courses the list of codes of their members) Tutors, authors and guarantors (gar.)	Completion	Credits	Scope	Semester	Role
BDIP25	Diploma Thesis	Z	25	22s	L	Р

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

Diploma Thesis

Independent final comprehensive work for the Master's degree study programme. A student will choose a topic from a range of topics related to his or her branch of study, which will be specified by branch department or branch departments. The diploma thesis will be defended in front of the board of examiners for the comprehensive final examination.

Name of the block: Povinné p edm ty zam

Minimal number of credits of the block: 45

The role of the block: PZ

Code of the group: 2018_MEEMEPS

Name of the group: Compulsory subjects of the specialization

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:

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
BE1M13EKP	Ecology and Materials Pavel Žák, Zuzana Šaršounová, Jan Weinzettel, Eva Horynová, Branislav Dzur ák, Michael Fridrich Jan Weinzettel Ivan Kudlá ek (Gar.)	Z,ZK	5	2P+2L	Z	PZ
BE1M14ESP	Electric Machinery and Apparatus Pavel Mindl, Miroslav Chomát Miroslav Chomát Pavel Mindl (Gar.)	Z,ZK	5	2P+2L	Z	PZ
BE1M15TVN	High Voltage Engineering Jan Hlavá ek	Z,ZK	5	2P+2L	L	PZ
BE1M13ASS	Solar Systems Application Rupendra Kumar Sharma, Jakub Holovský, Vít zslav Benda, Arao Minamau Pambo Jakub Holovský Vít zslav Benda (Gar.)	Z,ZK	5	2P+2L	Z	PZ
BE1M14TVM	Theory and Application of Power Converters Ji í Lettl Ji í Lettl (Gar.)	Z,ZK	5	2P+2L	L	PZ
BE1M15PRE1	Transmission and Distribution of Electricity Ghaeth Fandi, Zden k Müller Zden k Müller Zden k Müller (Gar.)	Z,ZK	5	2P+2S	Z	PZ

Characteristics of the courses of this group of Study Plan: Code=2018_MEEMEPS Name=Compulsory subjects of the specialization

BE1M13EKP	Ecology and Materials			Z,ZK	5

Electrical Technology from the perspective of ecology. Environmental assessment of the various types of surface protection. Environmental aspects of protective systems used in electronics. Environmental impacts of electrical production. Ekodesign proposal of the electrical product. Principles of the proposal product for a difficult operating environment. Disposal of electrical waste.

Electric Machinery and Apparatus

The course is focused on contact and solid-state switching devices in LV networks. Basic topologies AC switches and stress of their components, systems with modern semiconductor devices and their protection circuits, testing electrical devices. The course also deals with the general theory of electrical machines. Magnetic field. Fundamentals of commutation. The transformer efficiency, voltage drop. Transients - switch to the network, a short circuit. Mathematical model of synchronous and asynchronous machines. A rotating magnetic field. Induction machine, starting and speed control. Influence of harmonic magnetic field. Single-phase induction motor. Work synchronous machine on a network. Torque, stability, overload capacity.

BE1M15TVN High Voltage Engineering

Z,ZK The course contains the fundamental theories of high voltage engineering with respect to application in electrical power engineering. The knowledge of high voltage generators, measurement technique of high voltages and currents, properties of insulation systems, diagnostics methods and electrical discharges and their elimination. The practical laboratory exercises in high voltage laboratory are included.

BE1M13ASS Solar Systems Application

Solar energy, Photovoltaic phenomena, Photovoltaic cells and modules and their characteristics, Photovoltaic systems and their applications, Photo-thermal phenomena, Photo-thermal power stations. Significance, economic and environmental aspects of solar energy exploitation.

Z.ZK

5

Theory and Application of Power Converters

The course focuses on typical applications of power semiconductor converters on their sizing, switching and protection of power semiconductor converters. It also summarizes the basics of modulation and control strategies of power semiconductor converters and modern trends in their application in electric drives and other applications.

BE1M15PRE1 Transmission and Distribution of Electricity

Z.ZK

5

The course introduces particular topics concerning transmission and distribution systems, mainly load flow solutions, specific aspects of system steady states and possibilities to control these states. The course also deals with synchronous generators characteristics in different operational states.

Code of the group: 2018_MEEMEPPS1

Name of the group: Compulsory subjects of the specialization

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 3 courses

Credits in the group: 15

Note on the group:

Specializace Elektrické pohony

	I e					
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
BE1M14REP	Control and Regulation of Electric Drives Evžen Thöndel, Radek Havlí ek Miroslav Chomát	Z,ZK	5	2P+2L	Z	PZ
BE1M14DEP	Digital Control of Electric Drives Jan Bauer	Z,ZK	5	2P+2L	L	PZ
BE1M14EPT1	Electric Drives and Traction	Z,ZK	5	2P+2L	Z	PZ

Characteristics of the courses of this group of Study Plan: Code=2018_MEEMEPPS1 Name=Compulsory subjects of the specialization

BE1M14REP Control and Regulation of Electric Drives

Z,ZK

5

The course is an introduction to the problems of the theory of continuous control of electrical drives and power converters. During the semester are discussed the basics of feedback control, transmission system, determining the stability of the system, including controller types and methods of tuning.

BE1M14DEP | Digital Control of Electric Drives

Z,ZK

5

The course deals with basics blocks of control computer for electric drive. It is also discussed the issue of discretization drive control and software and hardware resources needed for developing and debugging control program for electric drive.

BE1M14EPT1 | Electric Drives and Traction

Z,ZK

5

The course focuses on the principles of designing electric drives with AC motors in different ways and different types of load, reliability, design for explosive environments and for special purposes and the necessary technical documentation. Students learn the basics of electric traction drives for trams in public transport systems, electric locomotives, as well as the systems of hybrid cars and electric vehicles.

Name of the block: Compulsory elective courses

Minimal number of credits of the block: 15

The role of the block: PV

Code of the group: 2018_MEEMEPV1

Name of the group: Compulsory elective subjects of the specialization

Requirement credits in the group: In this group you have to gain at least 10 credits (at most 20)

Requirement courses in the group: In this group you have to complete at least 2 courses (at most 4)

Credits in the group: 10 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
BE1M16EUE1	Economy of Energy Use Ji í Beranovský, Michaela Valentová Michaela Valentová Ji í Beranovský (Gar.)	Z,ZK	5	2P+2S	L	PV
BE1M15ELS	Electrical Light Marek Bálský	Z,ZK	5	2P+2L	L	PV
BE1M14MDS1	Modeling of Dynamical Systems	Z,ZK	5	2P+2C	L	PV
BE1M13VSE	Power components in electrical engineering	Z,ZK	5	2P+2L	L	PV

Characteristics of the courses of this group of Study Plan: Code=2018_MEEMEPV1 Name=Compulsory elective subjects of the specialization

BE1M16EUE1	Economy of Energy Use	Z,ZK	5
Organization and energ	y management of company, buildings or energy systems. Energy need and consumption, energy balance. Energy characteri	zation of aggrega	te, secondary
energy sources Energy	audit and feasibility study ontimization of energy management of energy systems. Prices and tariffs, economy and financial	analysis	

BE1M15ELS Electrical Light Z,ZK 5

The aim of the course is to make students acquainted with most frequent applications of optical radiation and with theoretical and practical principles of resolving lighting systems for indoor and outdoor areas, respecting necessary visual performance with emphasis on energy efficiency solutions and aspects of health and safety.

BE1M14MDS1 | Modeling of Dynamical Systems | Z,ZK | 5

The course deals with combining knowledge of the dynamics of rigid bodies, fluid mechanics, aerodynamics, gas dynamics and thermodynamics in the compilation of nonlinear models of dynamic systems. Seminars are focused on assembling of numeric models in Matlab / Simulink.

BE1M13VSE Power components in electrical engineering

Power semiconductor device (diodes, BJTs, thyristors, MOSFETs and IGBTs) and integraed structures (modules). Structures, function, characteristics and parameters, Passive components of power electronic. Connection of devices in parallel and in series.

Code of the group: 2018_MEEMEH Name of the group: Humanities subjects

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:

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
BE0M16HSD1	History of economy and social studies	Z,ZK	5	2P+2S	Z,L	PV
BE0M16HVT	History of science and technology 2	Z,ZK	5	2P+2S	Z,L	PV
BE0M16FIL	Philosophy 2 Peter Zamarovský Peter Zamarovský (Gar.)	Z,ZK	5	2P+2S	Z,L	PV
BE0M16PSM	Psychology	Z,ZK	5	2P+2S	Z,L	PV
BE0M16TEO	Theology	Z,ZK	4	2P+2S	L	PV

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

BE0M16HSD1	History of economy and social studies	Z,ZK	5				
This subject deals with	This subject deals with the history of the Czech society in the 19th - 21th centuries. It follows the forming of the Czech political representation, its aims and achieved results as well as						
the social and cultural of	the social and cultural development and coexistence of the various ethnical groups in the Czech countries.						
BE0M16HVT	History of science and technology 2	Z,ZK	5				

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

BE0M16FIL	Philosophy 2	Z.ZK	5
BE0M16PSM	Psychology	Z,ZK	5
BE0M16TEO	Theology	Z,ZK	4

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

Name of the block: Elective courses Minimal number of credits of the block: 0

The role of the block: V

Code of the group: 2018_MEEMEVOL 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: ~Student can choose arbitrary subject of themagister's program (EEM - Electrical Engineering, Power Engineering and Management, EK - Electronics and Communications, KYR - Cybernetics and Robotics, OI - Open Informatics, OES - Open Electronics Systems) which is not part of his curriculum. Student can choose with consideration of recommendation of the branch guarantee. You can find a selection of optional courses organized by the departments on the web site

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

List of courses of this pass:

Code	Name of the course	Completion	Credits
BDIP25	Diploma Thesis	Z	25
Independent final	comprehensive work for the Master's degree study programme. A student will choose a topic from a range of topics related to his or h	ner branch of study	, which will

be specified by branch department or branch departments. The diploma thesis will be defended in front of the board of examiners for the comprehensive final examination.

BE0M16FIL	Philosophy 2	Z,ZK	5
BE0M16HSD1	History of economy and social studies	Z,ZK	5
	history of the Czech society in the 19th - 21th centuries. It follows the forming of the Czech political representation, its aims		-
	the social and cultural development and coexistence of the various ethnical groups in the Czech countries.		
BE0M16HVT	History of science and technology 2	Z,ZK	5
	al developments in electrical engineering branches in the world and in the Czech Lands. Its ultimate goal is to stimulate stud		-
aditions of the subject, w	hile highlighting the developments in technical education and professional organizations, the process of shaping scientific life engineers	e and the influence	e of technic
BE0M16PSM	Psychology	Z,ZK	5
BEOM16TEO	Theology	Z,ZK	4
	udents the basic orientation in christian theology and requires no special previous education. After short philosophic lecture	1 '	1 -
re gone through. The subj	ect is determined not only to believer students who want to know the reliable theologic grounding but also above all to ones where the students who want to know the reliable theologic grounding but also above all to ones where the students who want to know the reliable theologic grounding but also above all to ones where the students who want to know the reliable theologic grounding but also above all to ones where the students who want to know the reliable theologic grounding but also above all to ones where the students who want to know the reliable theologic grounding but also above all to ones where the students who want to know the reliable theologic grounding but also above all to ones where the students who want to know the reliable theologic grounding but also above all to ones where the students where the stud	ho want to get know	w Christian
	- religion from which graws our civilization up.		
BE1M13ASS	Solar Systems Application	Z,ZK	5
olar energy. Photovoltaic	phenomena. Photovoltaic cells and modules and their characteristics. Photovoltaic systems and their applications. Photo-ther power stations. Significance, economic and environmental aspects of solar energy exploitation.	rmai pnenomena.F	noto-tnern
BE1M13EKP	Ecology and Materials	Z,ZK	5
	m the perspective of ecology. Environmental assessment of the various types of surface protection. Environmental aspects of	1 '	_
ectronics. Environmental	impacts of electrical production. Ekodesign proposal of the electrical product. Principles of the proposal product for a difficult of	operating environm	ent. Dispos
	of electrical waste.		_
BE1M13JAS1	Quality and Reliability	Z,ZK	6
	ns from the area of quality and reliability and their control, philosophy of quality, systems of quality control in the world. Relial of reliability, basic distributions used in reliability and their basic characteristics. Back-up using a warm and cold standby, type		
	nd systems, calculation of reliability using composition and decomposition, and using a method of a list. Basic statistical method		-
	I tools for quality control. Techniques FMEA and QFFD, house of quality. Capability of a process. Taguchi loss function. Audit	-	-
BE1M13VSE	Power components in electrical engineering	Z,ZK	5
Power semiconductor d	evice (diodes, BJTs, thyristors, MOSFETs and IGBTs) and integraed structures (modules). Structures, function, characterist	ics and parameter	s, Passive
DE ANA ADED	components of powet electronic. Connection of devices in parallel and in series.	7.71/	
BE1M14DEP	Digital Control of Electric Drives cs blocks of control computer for electric drive. It is also discussed the issue of discretization drive control and software and	Z,ZK	5
ne course deals with basi	developing and debugging control program for electric drive.	nardware resource	33 Heeded
BE1M14EPT1	Electric Drives and Traction	Z.ZK	5
l l	principles of designing electric drives with AC motors in different ways and different types of load, reliability, design for explosi	ve environments a	nd for spec
purposes and the necess	ary technical documentation. Students learn the basics of electric traction drives for trams in public transport systems, electric	ric locomotives, as	well as the
	systems of hybrid cars and electric vehicles.		
BE1M14ESP	Electric Machinery and Apparatus	Z,ZK	5
he course is focused on c	ontact and solid-state switching devices in LV networks. Basic topologies AC switches and stress of their components, syste	ms with modern se	emiconduct
he course is focused on clevices and their protection	, ,,	ms with modern se damentals of com	emiconduct
The course is focused on one levices and their protection transformer efficiency, vo	ontact and solid-state switching devices in LV networks. Basic topologies AC switches and stress of their components, systencicults, testing electrical devices. The course also deals with the general theory of electrical machines. Magnetic field. Fundamental stress of their components, systematics and stress of their components.	ms with modern sed damentals of comines. A rotating mag	emiconduct mutation. To gnetic field.
he course is focused on of evices and their protection transformer efficiency, von duction machine, starting	ontact and solid-state switching devices in LV networks. Basic topologies AC switches and stress of their components, systencircuits, testing electrical devices. The course also deals with the general theory of electrical machines. Magnetic field. Fundiage drop. Transients - switch to the network, a short circuit. Mathematical model of synchronous and asynchronous machine and speed control. Influence of harmonic magnetic field. Single-phase induction motor. Work synchronous machine on a net capacity.	ms with modern sed damentals of comines. A rotating mag twork. Torque, stab	emiconduct mutation. T gnetic field. vility, overlo
he course is focused on c evices and their protection transformer efficiency, vonduction machine, starting	ontact and solid-state switching devices in LV networks. Basic topologies AC switches and stress of their components, systent circuits, testing electrical devices. The course also deals with the general theory of electrical machines. Magnetic field. Fundatage drop. Transients - switch to the network, a short circuit. Mathematical model of synchronous and asynchronous machine and speed control. Influence of harmonic magnetic field. Single-phase induction motor. Work synchronous machine on a net capacity. Modeling of Dynamical Systems	ms with modern so damentals of comines. A rotating mag twork. Torque, stab	emiconduc mutation. T gnetic field bility, overlo
the course is focused on converge and their protection transformer efficiency, voluduction machine, starting BE1M14MDS1	ontact and solid-state switching devices in LV networks. Basic topologies AC switches and stress of their components, system circuits, testing electrical devices. The course also deals with the general theory of electrical machines. Magnetic field. Fundating drop. Transients - switch to the network, a short circuit. Mathematical model of synchronous and asynchronous machine and speed control. Influence of harmonic magnetic field. Single-phase induction motor. Work synchronous machine on a net capacity. Modeling of Dynamical Systems bining knowledge of the dynamics of rigid bodies, fluid mechanics, aerodynamics, gas dynamics and thermodynamics in the organization.	ms with modern so damentals of comines. A rotating mag twork. Torque, stab	emiconduct mutation. Tl gnetic field. pility, overloa
he course is focused on cevices and their protection transformer efficiency, voluduction machine, starting BE1M14MDS1 he course deals with com	ontact and solid-state switching devices in LV networks. Basic topologies AC switches and stress of their components, system circuits, testing electrical devices. The course also deals with the general theory of electrical machines. Magnetic field. Fundating drop. Transients - switch to the network, a short circuit. Mathematical model of synchronous and asynchronous machine and speed control. Influence of harmonic magnetic field. Single-phase induction motor. Work synchronous machine on a net capacity. Modeling of Dynamical Systems bining knowledge of the dynamics of rigid bodies, fluid mechanics, aerodynamics, gas dynamics and thermodynamics in the of dynamic systems. Seminars are focused on assembling of numeric models in Matlab / Simulink.	ms with modern some damentals of commes. A rotating mag twork. Torque, stab Z,ZK compilation of nonless.	emiconduct mutation. Tl gnetic field. illity, overloa 5 linear mode
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he course is focused on cevices and their protection transformer efficiency, volduction machine, starting BE1M14MDS1 he course deals with com	ontact and solid-state switching devices in LV networks. Basic topologies AC switches and stress of their components, system circuits, testing electrical devices. The course also deals with the general theory of electrical machines. Magnetic field. Fundating drop. Transients - switch to the network, a short circuit. Mathematical model of synchronous and asynchronous machine and speed control. Influence of harmonic magnetic field. Single-phase induction motor. Work synchronous machine on a net capacity. Modeling of Dynamical Systems bining knowledge of the dynamics of rigid bodies, fluid mechanics, aerodynamics, gas dynamics and thermodynamics in the of dynamic systems. Seminars are focused on assembling of numeric models in Matlab / Simulink.	ms with modern so damentals of commes. A rotating may twork. Torque, stab Z,ZK compilation of nonlocal	emiconduc mutation. T gnetic field. illity, overlo 5 linear mode
he course is focused on cevices and their protection transformer efficiency, voluduction machine, starting BE1M14MDS1 he course deals with comBE1M14REP The course is an introduct	ontact and solid-state switching devices in LV networks. Basic topologies AC switches and stress of their components, system circuits, testing electrical devices. The course also deals with the general theory of electrical machines. Magnetic field. Fundatage drop. Transients - switch to the network, a short circuit. Mathematical model of synchronous and asynchronous machine and speed control. Influence of harmonic magnetic field. Single-phase induction motor. Work synchronous machine on a net capacity. Modeling of Dynamical Systems bining knowledge of the dynamics of rigid bodies, fluid mechanics, aerodynamics, gas dynamics and thermodynamics in the of dynamic systems. Seminars are focused on assembling of numeric models in Matlab / Simulink. Control and Regulation of Electric Drives ion to the problems of the theory of continuous control of electrical drives and power converters. During the semester are dis	ms with modern so damentals of commes. A rotating may twork. Torque, stab Z,ZK compilation of nonlocal	emiconduc mutation. T gnetic field. illity, overlo 5 linear mode
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BE1M16EUE1	Economy of Energy Use	Z,ZK	5		
Organization and energy management of company, buildings or energy systems. Energy need and consumption, energy balance. Energy characterization of aggregate, secondary					
energy sources. Energy audit and feasibility study, optimization of energy management of energy systems. Prices and tariffs, economy and financial analysis.					
BE1MPROJ	Individual project	Z	5		
Independent work in the form of a project. A student will choose a topic from a list of topics specified by branch department. The project will be defended within the framework of a					
subject.					

For updated information see http://bilakniha.cvut.cz/en/f3.html Generated: day 2025-06-05, time 10:27.