Recomended pass through the study plan

Name of the pass: Cybernetics and Robotics - Passage through study

Faculty/Institute/Others: Department: Pass through the study plan: Cybernetics and Robotics 2016 Branch of study guranteed by the department: Common courses Guarantor of the study branch: Program of study: Welcome page Type of study: unknown full-time Note on the pass:

Coding of roles of courses and groups of courses:

P - compulsory courses of the program, PO - compulsory courses of the branch, Z - compulsory courses, S - compulsory elective courses, PV - compulsory elective courses, F - elective specialized courses, V - elective courses, T - physical training courses

Coding of ways of completion of courses (KZ/Z/ZK) and coding of semesters (Z/L):

KZ - graded assesment, Z - assesment, ZK - examination, L - summer semester, Z - winter semester

Number of semes	ster: 1					
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
B3B04PSA	Academic Writing Petra Juna Jennings, Jitka Pinková Jitka Pinková Petra Juna Jennings (Gar.)	КZ	2	2C	Z	Р
B3B33ALP	Algorithms and Programming Vojt ch Vonásek Vojt ch Vonásek (Gar.)	Z,ZK	6	2P+2C	Z	Ρ
BEZB	Safety in Electrical Engineering for a Bachelor's Degree Ivana Nová, Radek Havlí ek, Vladimír K la Radek Havlí ek Vladimír K la (Gar.)	Z	0	2BP+2BC	Z,L	Ρ
B0B01LAG	Linear Algebra Ji í Velebil, Jakub Rondoš, Natalie Žukovec, Daniel Gromada, Josef Dvo ák, Mat j Dostál Ji í Velebil Ji í Velebil (Gar.)	Z,ZK	8	4P+2S	z	Ρ
B0B01LGR	Logic and Graphs Natalie Žukovec, Mat j Dostál, Alena Gollová Alena Gollová Marie Demlová (Gar.)	Z,ZK	5	3P+2S	Z,L	Ρ
B0B01MA1	Mathematical Analysis 1 Josef Dvo ák, Martin K epela, Josef Tkadlec, Veronika Sobotíková Josef Tkadlec Josef Tkadlec (Gar.)	Z,ZK	7	4P+2S	Z,L	Ρ
B3B35RO	Robots	KZ	2	1P+2L	Z	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	Ρ

Number of semes	ster: 2					
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 Tutors, authors and guarantors (gar.) Completion Credits		Scope	Semester	Role	
B0B35APO	Computer Architectures Petr Št pán, Pavel Píša, Richard Šusta Pavel Píša Pavel Píša (Gar.)	Z,ZK	5	2P+2L	L	Р
B0B01DRN	Differencial Equations and Numerical Analysis Jakub Rondoš, Daniel Gromada, Josef Dvo ák, Petr Habala, Jakub Stan k Petr Habala Petr Habala (Gar.)	Z,ZK	4	2P+2C	L	Р
B3B02FY1	Physics 1 Michal Bedna ík, Petr Koní ek Michal Bedna ík Michal Bedna ík (Gar.)	Z,ZK	6	4P+1L+2C	L	Р
B0B01MA2	Mathematical Analysis 2 Miroslav Korbelá , Petr Hájek, Martin Bohata, Jaroslav Tišer, Karel Pospíšil, Paola Vivi, Hana Tur inová Petr Hájek Jaroslav Tišer (Gar.)	Z,ZK	7	4P+2S	L,Z	Р
B3B36PRG	Programming in C Jan Faigl Jan Faigl (Gar.)	Z,ZK	6	2P+2C	L	Ρ
2015_BKYRVOL	Volitelné odborné p edm ty	Min. cours. 0	Min/Max 0/999			V

Number of semester: 3

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
B3B31EPO	Electronic Devices and Circuits Ji í Hospodka, Ond ej Brunner, Tomáš Kouba, Jan Havlík Ji í Hospodka Ji í Hospodka (Gar.)	Z,ZK	6	4P+2L	z	Р
B3B02FY2	Physics 2 Michal Bedna ík, Petr Koní ek, Vojt ch Jandák, Marek Brothánek Michal Bedna ík Michal Bedna ík (Gar.)	Z,ZK	6	3P+1L+2C	z	Р
B3B01KAT	Complex Analysis and Transformations Martin Bohata	Z,ZK	7	4P+2S	Z	Р
B0B35LSP	Logic systems and processors Richard Šusta, Martin Hlinovský Martin Hlinovský Zden k Hurák (Gar.)	Z,ZK	6	2P+2L	L	Р
B3B31SAS	Signals and Systems Radoslav Bortel, Pavel Sovka, Tomáš Bo il Pavel Sovka Pavel Sovka (Gar.)	Z,ZK	5	2P+2C	Z	Р

Number of semes	ster: 4					
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
B3B35ARI	Automatic Control	Z,ZK	7	4P+2L	L	Р
B3B33KUI	Cybernetics and Artificial Intelligence Tomáš Svoboda, Petr Pošík Tomáš Svoboda Tomáš Svoboda (Gar.)	Z,ZK	6	2P+2C	L	Р
B0B01PST	Probability and Statistics Kate ina Helisová Kate ina Helisová Petr Hájek (Gar.)	Z,ZK	7	4P+2S	Z	Р
B3B38SME	Sensors and Measurements Vojt ch Petrucha, Pavel Ripka Vojt ch Petrucha Vojt ch Petrucha (Gar.)	Z,ZK	6	3P+2L	L	Р
		Min. cours.				
	Povinn volitelné p edm tv programu - laborato e	1	Min/Max			
2015_DKTKLAD	B3B35LAR,B3B38LPE, (see the list of groups below)	Max. cours.	4/12			PV
		3				

Number of semes	ster: 5					
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
B3B38KDS	Communication and Distributed Systems Ji í Novák, Jan Holub Ji í Novák Ji í Novák (Gar.)	Z,ZK	6	4P+2L	Z	Ρ
B0B33OPT	Optimization Tomáš Werner, Petr Olšák, Mirko Navara, Tomáš Kroupa Tomáš Werner Tomáš Werner (Gar.)	Z,ZK	7	4P+2C	Z,L	Р
B3BPROJ4	Bachelor Project Martin Hlinovský, Petr Pošík, Jana Kostlivá, Tomáš Drábek, Jana Zichová, Drahomíra Hejtmanová, Martin Šipoš, Kamila Krupková Martin Hlinovský (Gar.)	Z	4	4s	Z	Р
B3B33ROB	Robotics	Z,ZK	5	2P+2L	Z	Р
		Min. cours.				
2015 BKYRPV	Povinn volitelné p edm ty programu	4	Min/Max			PV
	B3B14EPR,B3B35MSD, (see the list of groups below)	Max. cours.	16/24			
		6				

Number of semes	ster: 6					
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
BBAP16	Bachelor Thesis	Z	16	15s	L,Z	Р
B3B04PRE	Presentation Skills Petra Juna Jennings, Jitka Pinková Jitka Pinková Petra Juna Jennings (Gar.)	KZ	2	2C	L	Р
2015_BKYRPV	Povinn volitelné p edm ty programu B3B14EPR,B3B35MSD, (see the list of groups below)	Min. cours. 4 Max. cours.	Min/Max 16/24			PV

		6			
2015_BKYRVOL		Min. cours.	Min/Max		N
	voliteine odborne p edm ty	0	0/999		V

List of groups of courses of this pass with the complete content of members of individual groups

Kód		Name of the group of group (for specification	courses and on see here of	codes of members of this r below the list of courses)	Com	pletion	Credi	ts Scope	Semester	Role
2015_BKY	'RLAB	Povinn volitelne	épedm typ	rogramu - laborato e	Min. Max	cours. 1 cours. 3	Min/M 4/12	ax		PV
B3B35LAR	Laboratory	of applied electronic	B3B38LPE	Laboratories of Industrial Elect		B3B33LA	\R	Laboratory of	robotics	
2015_BK	YRPV	Povinn vo	blitelné p edn	n ty programu	Min. Max	cours. 4 cours. 6	Min/M 16/24	ax 1		PV
B3B14EPR	Electric Dri	ves for Automation a	B3B35MSD	Modeling and Simulation of Dynam	۱	B3B380	TE	Circuit Techno	ology	
B3B35PAR	Programm	ing of logic controllers	B3B38VSY	Embedded Systems		B3B33VI	R	Robot Learnir	ng	
2015_BKY	RVOL	Volite	Iné odborné	p edm ty	Min.	cours. 0	Min/M 0/999	ax)		v

List of courses of this pass:

Code	Name of the course	Completion	Credits				
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.							
B0B01LAG	Linear Algebra	Z,ZK	8				
The course covers t	he initial parts of linear algebra. Firstly, the basic notions of a linear space and linear mappings are covered (linear dependence and inde	pendence, basis,	coordinates,				
etc). The calculus of	of matrices (determinants, inverse matrices, matrices of a linear map, eigenvalues and eigenvectors, diagonalisation, etc) is covered	next. The application	ons include				
	solving systems of linear equations, the geometry of a 3D space (including the scalar product and the vector product) and SV	/D.					
B0B01LGR	Logic and Graphs	Z,ZK	5				
This course covers	pasics of mathematical logic and graph theory. Syntax and semantics of propositional and predicate logic are introduced. The importanc	e of the notion of co	onsequence				
	and of the relationship between a formula and its model is stressed. Further, basic notions from graph theory are introduced	d					
B0B01MA1	Mathematical Analysis 1	Z,ZK	7				
	The aim of the course is to introduce students to basics of differential and integral calculus of functions of one variable.						
B0B01MA2	Mathematical Analysis 2	Z,ZK	7				
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	ns function				
	series and power series with application to Taylor and Fourier series.						
B0B01PST	Probability and Statistics	Z,ZK	7				
B0B33OPT	Optimization	Z,ZK	7				
The course provide	s an introduction to mathematical optimization, specifically to optimization in real vector spaces of finite dimension. The theory is illustrat	ed with a number of	of examples.				
	You will refresh and extend many topics that you know from linear algebra and calculus courses.						
B0B35APO	Computer Architectures	Z,ZK	5				
B0B35LSP	Logic systems and processors	Z,ZK	6				
The course introduc	es computing resources' basic hardware structures, design, and architecture. It provides an overview of the possibilities of performing d	ata operations at th	ne hardware				
level and designing	g embedded processor systems with peripherals on modern FPGA programmable logic circuits, which are increasingly widely used t	oday. Students will	learn their				
description in VHI	DL, from logic to more complex sequential circuits to practical finite state machine (FSM) designs. They will also master the correct de	esign procedure us	sing circuit				
simulation. Practica	l problems are solved using development boards that hundreds of leading universities worldwide also use. The course ends with RISC	 V processor struct 	ture, cache,				
	and pipeline processing. [last updated January 2024]						
B3B01KAT	Complex Analysis and Transformations	Z,ZK	7				
B3B02FY1	Physics 1	Z,ZK	6				
The basic course of	physics at the Faculty of Electrical Engineering - Physics 1, is devoted to the introduction into two important areas of physics. The first	st one is a classica	I mechanics				
and the second one	and the second one is the electric and magnetic field. Within the framework of the classical mechanics, the students study the particle kinematics; dynamics of the mass particle, system						
of mass particles and rigid bodies. The students should be able to solve basic problems dealing with the description of mechanical systems, which they can meet during their further							
studies. The classic	studies. The classical mechanics is followed by the relativistic mechanics, electric and magnetic field - both stationary as well as non-stationary. The students can use the facts gained						

	consecutive course Physics 2.	is required for the	Study of the
B3B02EY2	Physics 2	7 7K	6
The course Physics	s 2 is closelv linked with the course Physics 1. Within the framework of this course the students will first of all learn foundations of the	rmodvnamics. Fol	lowing topic
- the theory of wave	es - will give to the students basic insight into the properties of waves and will help to the students to understand that the presented of	description of the v	vaves has a
universal characte	er in spite of the waves character. Particular types of waves, such as acoustic or optical waves are the subjects of the following section	on. Quantum mech	anics and
nuclear physics w	vill complete the student?s general education in physics. The knowledge gained in this course will help to the students in study of suc	h modern areas a	s robotics,
com	puter vision, measuring technique and will allow them to understand the principles of novel technologies and functioning of new elec	tronic devices.	
B3B04PRE	Presentation Skills	KZ	2
B3B04PSA	Academic Writing	KZ	2
Practically focuse	d course in which students learn how or improve their ability to correctly and effectively formulate common written documents such a	as their own notes,	research,
	reports, protocols, articles, etc. Students will be acquainted with the main principles of writing professional texts.		
B3B14EPR	Electric Drives for Automation and Robotics	Z,ZK	4
The course gives a b	prief overview of basic types of electric drives. It deals with drives with DC, asynchronous, synchronous and special motors including powe	er electronic conver	ters.Another
topics include contr	or strategies such as scalar, vector, direct, sensoriess control of AC drives, pulse width modulation strategies and various load types.	It is focused on un	derstanding
of analyzed system	s suitable for both off-line simulation and online-adapted dynamic and real-time control using the basis of modern microprocessor tech	ponuing mathema phology Problems	of operating
states, sensors and	I diagnostics of electric drives are also discussed. Basic knowledge of mathematics, mechanics, kinematics, dynamics, theory of elect	romagnetic field. c	ircuit theory
	and control theory are assumed.		,
B3B31EPO	Electronic Devices and Circuits	Z.ZK	6
The course introdu	ices students to the basic principles and methods of analysis of electrical circuits. Defines the circuit elements and gives their element	ntary application. If	deals with
the basic fundamen	ts of electronic systems based on analog as well as digital circuits. The course presents operational principles and methods of analysi	is of these circuits	with respect
	to the use of cybernetics and control systems.		
B3B31SAS	Signals and Systems	Z,ZK	5
The course focuses	on explaining basic terms used for the description and analysis of determined signals and systems (including filters) in continuous- a	nd discrete-time. T	he graduate
will acquire	a basic overview of the issues and learn how to work with concepts, perform simple analysis of systems and signals, and interpret a	nd discuss the res	ults.
B3B33ALP	Algorithms and Programming	Z,ZK	6
This subject will	give students a basic understanding of algorithms and programming and teach them to design, implement and test algorithms for sin	nple tasks. The stu	dents will
understand the not	tion of computational complexity. They will learn about basic program building blocks such as loops, conditional statements, variables	s, functions and red	cursion. We
will introduce the	most often used data structures (queue, stack, list, array etc) and operations on them. We will snow the basic algorithms, for example students will learn to write simple programs in Puthon	le for searching an	a sorting.
	Students will earl to write simple programs in Fython.	7 71/	6
The course introdu	CyDEMELICS AND ALLINCIAL INCENTION OF CONTROL PROVIDENTIAL INCOMENTATION OF CONTROL PROVIDENTIAL ADV	∠,∠N ances the knowled	0 Ine of state
space search algor	rithms by including uncertainty in state transition. Students are introduced into reinforcement learning for solving problems when the	state transitions ar	e unknown.
which also connect	ts the artificial intelligence and cybernetics fields. Bayesian decision task introduces supervised learning. Learning from data is demo	onstrated on a linea	ar classifier.
	Studente presties the algoritms in computer labo		
	Students practice the algorithms in computer labs.		
B3B33LAR	Laboratory of robotics	KZ	4
B3B33LAR During this laborate	Laboratory of robotics ry courses the students are introduced with the practical robotics through solving of practical tasks. Students are working in laborato	KZ ries in groups whic	4 ch consist of
B3B33LAR During this laborato 3 or 4 members	Laboratory of robotics ry courses the students are introduced with the practical robotics through solving of practical tasks. Students are working in laborato s. During the semester, each group of students jointly solve one practical problem in the field of robotics. Tasks are designed to introd	KZ ries in groups whic luce students with	4 ch consist of robotics
B3B33LAR During this laborato 3 or 4 members (manipulators and r	Laboratory of robotics ry courses the students are introduced with the practical robotics through solving of practical tasks. Students are working in laborato s. During the semester, each group of students jointly solve one practical problem in the field of robotics. Tasks are designed to introd mobile robots). The students should utilize the basic knowledge obtained in previous study (eg. mathematics, physics, electronics, sol	KZ ries in groups whic luce students with ftware developmer	4 ch consist of robotics nt). Students
B3B33LAR During this laborato 3 or 4 members (manipulators and r can select specific t	Laboratory of robotics ry courses the students are introduced with the practical robotics through solving of practical tasks. Students are working in laborato s. During the semester, each group of students jointly solve one practical problem in the field of robotics. Tasks are designed to introd mobile robots). The students should utilize the basic knowledge obtained in previous study (eg. mathematics, physics, electronics, sol ask from few tasks with different specialization, which are announced each semester. Tasks differs between semesters. An integral par	KZ ries in groups whic luce students with ftware developmer rt of the solution of	4 ch consist of robotics nt). Students the problem
B3B33LAR During this laborato 3 or 4 members (manipulators and r can select specific t	Laboratory of robotics ory courses the students are introduced with the practical robotics through solving of practical tasks. Students are working in laborato s. During the semester, each group of students jointly solve one practical problem in the field of robotics. Tasks are designed to introd mobile robots). The students should utilize the basic knowledge obtained in previous study (eg. mathematics, physics, electronics, sol ask from few tasks with different specialization, which are announced each semester. Tasks differs between semesters. An integral par is cooperation and communication in the student team.	KZ ries in groups whic luce students with ftware developmer t of the solution of	4 ch consist of robotics nt). Students the problem
B3B33LAR During this laborato 3 or 4 members (manipulators and r can select specific t B3B33ROB The course is an int	Laboratory of robotics rry courses the students are introduced with the practical robotics through solving of practical tasks. Students are working in laborato s. During the semester, each group of students jointly solve one practical problem in the field of robotics. Tasks are designed to introd mobile robots). The students should utilize the basic knowledge obtained in previous study (eg. mathematics, physics, electronics, sol ask from few tasks with different specialization, which are announced each semester. Tasks differs between semesters. An integral par is cooperation and communication in the student team. Robotics troduction into industrial robotics with the emphasic on the industrial robots and manipulators. The robot kinematics is thoroughly stur-	KZ ries in groups whic luce students with ftware developmer rt of the solution of Z,ZK died. The student s	4 ch consist of robotics nt). Students the problem 5 chall be able
B3B33LAR During this laborato 3 or 4 members (manipulators and r can select specific t B3B33ROB The course is an int	Laboratory of robotics ry courses the students are introduced with the practical robotics through solving of practical tasks. Students are working in laborato s. During the semester, each group of students jointly solve one practical problem in the field of robotics. Tasks are designed to introd mobile robots). The students should utilize the basic knowledge obtained in previous study (eg. mathematics, physics, electronics, sol ask from few tasks with different specialization, which are announced each semester. Tasks differs between semesters. An integral par is cooperation and communication in the student team. Robotics troduction into industrial robotics with the emphasis on the industrial robots and manipulators. The robot kinematics is thoroughly stude to choose, design, and program industrial robot and integrate it into the robotic cell after passing the course.	KZ ries in groups whic luce students with ftware developmer t of the solution of Z,ZK died. The student s	4 ch consist of robotics nt). Students the problem 5 shall be able
B3B33LAR During this laborato 3 or 4 members (manipulators and r can select specific t B3B33ROB The course is an int B3B33\/IR	Laboratory of robotics ry courses the students are introduced with the practical robotics through solving of practical tasks. Students are working in laborato s. During the semester, each group of students jointly solve one practical problem in the field of robotics. Tasks are designed to introd mobile robots). The students should utilize the basic knowledge obtained in previous study (eg. mathematics, physics, electronics, sol ask from few tasks with different specialization, which are announced each semester. Tasks differs between semesters. An integral par is cooperation and communication in the student team. Robotics troduction into industrial robotics with the emphasis on the industrial robots and manipulators. The robot kinematics is thoroughly stud to choose, design, and program industrial robot and integrate it into the robotic cell after passing the course. Robot L earning	KZ ries in groups which luce students with ftware development rt of the solution of Z,ZK died. The student s	4 ch consist of robotics tt). Students the problem 5 shall be able
B3B33LAR During this laborato 3 or 4 members (manipulators and r can select specific t B3B33ROB The course is an int B3B33VIR The course teacher	Laboratory of robotics ry courses the students are introduced with the practical robotics through solving of practical tasks. Students are working in laborato s. During the semester, each group of students jointly solve one practical problem in the field of robotics. Tasks are designed to introd mobile robots). The students should utilize the basic knowledge obtained in previous study (eg. mathematics, physics, electronics, sol ask from few tasks with different specialization, which are announced each semester. Tasks differs between semesters. An integral par is cooperation and communication in the student team. Robotics troduction into industrial robotics with the emphasis on the industrial robots and manipulators. The robot kinematics is thoroughly stud to choose, design, and program industrial robot and integrate it into the robotic cell after passing the course. Robot Learning sa application of machine learning methods and optimization on well-known robotic problems, such as semantic segmenation from R	KZ ries in groups whic luce students with ftware developmer t of the solution of Z,ZK died. The student s Z,ZK GB-D data or reac	4 ch consist of robotics tt). Students the problem 5 shall be able 4 tive motion
B3B33LAR During this laborato 3 or 4 members (manipulators and r can select specific t B3B33ROB The course is an int B3B33VIR The course teached control. The course	Laboratory of robotics ry courses the students are introduced with the practical robotics through solving of practical tasks. Students are working in laborato s. During the semester, each group of students jointly solve one practical problem in the field of robotics. Tasks are designed to introd mobile robots). The students should utilize the basic knowledge obtained in previous study (eg. mathematics, physics, electronics, sol ask from few tasks with different specialization, which are announced each semester. Tasks differs between semesters. An integral par is cooperation and communication in the student team. Robotics troduction into industrial robotics with the emphasis on the industrial robots and manipulators. The robot kinematics is thoroughly stud to choose, design, and program industrial robot and integrate it into the robotic cell after passing the course. Robot Learning es application of machine learning methods and optimization on well-known robotic problems, such as semantic segmenation from R re of the course represents teaching of deep learning methods. Stidents will use basic knowledge from optimization and linear algebre	KZ ries in groups whic luce students with ftware developmer t of the solution of Z,ZK died. The student s Z,ZK GB-D data or reac ra such as robut so	4 ch consist of robotics tt). Students the problem 5 shall be able 4 tive motion olving of
B3B33LAR During this laborato 3 or 4 members (manipulators and r can select specific t B3B33ROB The course is an int B3B33VIR The course teacher control. The course overdetermined sys	Laboratory of robotics Laboratory of robotics ry courses the students are introduced with the practical robotics through solving of practical tasks. Students are working in laborato s. During the semester, each group of students jointly solve one practical problem in the field of robotics. Tasks are designed to introd mobile robots). The students should utilize the basic knowledge obtained in previous study (eg. mathematics, physics, electronics, sol ask from few tasks with different specialization, which are announced each semester. Tasks differs between semesters. An integral par is cooperation and communication in the student team. Robotics troduction into industrial robotics with the emphasis on the industrial robots and manipulators. The robot kinematics is thoroughly stud to choose, design, and program industrial robot and integrate it into the robotic cell after passing the course. Robot Learning es application of machine learning methods and optimization on well-known robotic problems, such as semantic segmenation from R re of the course represents teaching of deep learning methods. Stidents will use basic knowledge from optimization and linear algebratement of non)linear (non)homogenous equations or gradient minimization methods. The labs are divided into two parts, in the first on	KZ ries in groups whice uce students with ftware development t of the solution of Z,ZK died. The student so Z,ZK GB-D data or react ra such as robut so e, the students will	4 ch consist of robotics tt). Students the problem 5 shall be able 4 tive motion plving of solve basic
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B3B38LPE	Laboratories of Industrial Electronics and Sensors	KZ	4				
The objective of the "Laboratories" is to introduce students in a playful and interactive way with basic blocks of an industrial sensor system - from the sensor itself, through signal							
processing circuits, analog to digital signal conversion, software processing by a microcontroller up to the sending of the results to the superior system or database and their presentation							
	to the user within the concept "Internet of Things".						
B3B38OTE	Circuit Technology	Z,ZK	4				
Basic types of circu	its and blocks of digital measuring instruments are described and analysed. Range and linearity for analogue circuits and interfaces	or digital circuits a	re analysed				
	in detail.						
B3B38SME	Sensors and Measurements	Z,ZK	6				
B3B38VSY	Embedded Systems	Z,ZK	4				
This subject is focu	ised on the embedded system design, especially using ARM Cortex-M based microcontrollers. The students need to solve two simple	e and two complex	projects of				
	embedded system design using microcontroller. These projects include both circuit and program realization.						
B3BPROJ4	Bachelor Project	Z	4				
BBAP16	Bachelor Thesis	Z	16				
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	tory course				
contains funda	mentals of Safety Electrical Engineering. In this way the students receive qualification of instructed person that enables them to work	on electrical equip	oment.				
BEZZ	Basic Health and Occupational Safety Regulations	Z	0				
The guidelines wer	e worked out based on The Training Scheme for Health and Occupational Safety designed for employees and students of the Czech \dot{T}	echnical University	/ in Prague,				
which was provided by the Rector's Office of the CTU. Safety is considered one of the basic duties of all employees and students. The knowledge of Health and Occupational Safety							
	regulations forms an integral and permanent part of qualification requirements. This program is obligatory.						

For updated information see <u>http://bilakniha.cvut.cz/en/FF.html</u> Generated: day 2025-07-09, time 23:57.