

Recommended pass through the study plan

Name of the pass: Učitelství elektrotechnických a kybernetických předmětů pro střední školy - průchod studiem

Faculty/Institute/Others: Faculty of Electrical Engineering

Department:

Pass through the study plan: Teaching of electrical engineering and cybernetics subjects for secondary schools

Branch of study guaranteed by the department: Welcome page

Guarantor of the study branch:

Program of study: Teaching electrical engineering and cybernetics subjects for secondary schools

Type of study: Follow-up master combined

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 semester: 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) <i>Tutors, authors and guarantors (gar.)</i>	Completion	Credits	Scope	Semester	Role
BDUM-DVE	Didaktika výuky v elektrotechnických oborech	Z,ZK	6	32KP		P
BDUM-DVK	Didaktika výuky v kybernetických oborech	Z,ZK	6	32KP		P
32MC-K-ODID-01	General Didactics	Z,ZK	5	16B		P
32MC-K-PEDO-01	General Pedagogy	Z,ZK	5	16B		P
32MC-K-PSEP-01	Psychology in Educational Process	Z,ZK	5	16B		P
32MC-K-UČSP-01	Role of Teachers in Modern Society	ZK	3	8B		P

Number of semester: 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) <i>Tutors, authors and guarantors (gar.)</i>	Completion	Credits	Scope	Semester	Role
BDUM-DES	Didaktika elektronické správy výuky	Z,ZK	6	32KP		P
BDUM-DEZ	Didaktika elektronických učebních zdrojů	Z,ZK	6	32KP		P
BDUM-PPP	Propedeutikum pedagogické praxe	KZ	6	32KP		P
2025_MUCIPVO-K	Povinně volitelné předměty programu - oborové <i>BDUM-AZS, BDUM-EPR,..... (see the list of groups below)</i>	Min. cours. 3 Max. cours. 6	Min/Max 18/36			PV

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) <i>Tutors, authors and guarantors (gar.)</i>	Completion	Credits	Scope	Semester	Role
32MC-K-MSVV-01	Social Science Research Methods	Z,ZK	3	8B		P
BDUM-RPP	Reflexe pedagogické praxe	Z	3	16KP		P
BDUM-SEM	Semester Project of Diploma Thesis	KZ	3			P
BDUM-SPP	Souvislá pedagogická praxe	KZ	15	450XH		P

2025_MUCIPVO-K	Povinně volitelné předměty programu - oborové <i>BDUM-AZS,BDUM-EPR,..... (see the list of groups below)</i>	Min. cours. 3 Max. cours. 6	Min/Max 18/36			PV
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Number of semester: 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) <i>Tutors, authors and guarantors (gar.)</i>	Completion	Credits	Scope	Semester	Role
BDUM-DIP	Diploma Thesis	Z	9			P
32MC-K-PEDS-01	Social Pedagogy	ZK	3	8B		P
2025_MUCIPV1-K	Povinně volitelné předměty programu - skupina 1 <i>BDUM-MLB,32ME-K-PRSK-01</i>	Min. cours. 1 Max. cours. 2	Min/Max 6/10			PV
2025_MUCIPV2-K	Povinně volitelné předměty programu - skupina 2 <i>32MC-K-SVZP-01,32MC-K-PSHY-01,..... (see the list of groups below)</i>	Min. cours. 2 Max. cours. 5	Min/Max 6/15			PV
2025_MUCIPV3-K	Povinně volitelné předměty programu - skupina 3 <i>BDUM-EPR</i>	Min. cours. 1 Max. cours. 4	Min/Max 6/24			PV

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

Kód	Name of the group of courses and codes of members of this group (for specification see here or below the list of courses)			Completion	Credits	Scope	Semester	Role
2025_MUCIPV1-K	Povinně volitelné předměty programu - skupina 1			Min. cours. 1 Max. cours. 2	Min/Max 6/10			PV
BDUM-MLB	Microcontroller Labs	32ME-K-PRSK-01	Presentation and Communication S ...					
2025_MUCIPV2-K	Povinně volitelné předměty programu - skupina 2			Min. cours. 2 Max. cours. 5	Min/Max 6/15			PV
32MC-K-SVZP-01	Education of Pupils with Special ...	32MC-K-PSHY-01	Psycho-hygiene Aspects of Teachi ...		32MC-K-SPKO-01	Social and Pedagogical Communica ...		
32MC-K-TECR-01	Impacts of Information Technolog ...	32MC-K-RIZZ-01	Risk Behavior of Pupils					
2025_MUCIPV3-K	Povinně volitelné předměty programu - skupina 3			Min. cours. 1 Max. cours. 4	Min/Max 6/24			PV
BDUM-EPR	Elektronická praktika							
2025_MUCIPVO-K	Povinně volitelné předměty programu - oborové			Min. cours. 3 Max. cours. 6	Min/Max 18/36			PV
BDUM-AZS	Signal analysis and processing	BDUM-EPR	Elektronická praktika		BDUM-KUI	Cybernetics and Artificial Intel ...		
BDUM-OTP	Obvodové techniky přístrojů	BDUM-ROB	Robotics in Education		BDUM-SES	Senzory a zpracování signálů		

List of courses of this pass:

Code	Name of the course	Completion	Credits
32MC-K-MSW-01	Social Science Research Methods	Z,ZK	3
32MC-K-ODID-01	General Didactics	Z,ZK	5
32MC-K-PEDO-01	General Pedagogy	Z,ZK	5
32MC-K-PEDS-01	Social Pedagogy	ZK	3
32MC-K-PSEP-01	Psychology in Educational Process	Z,ZK	5
32MC-K-PSHY-01	Psycho-hygiene Aspects of Teaching Profession	Z,ZK	3
32MC-K-RIZZ-01	Risk Behavior of Pupils	KZ	3
32MC-K-SPKO-01	Social and Pedagogical Communication	KZ	3
32MC-K-SVZP-01	Education of Pupils with Special Educational Needs	ZK	3
32MC-K-TECR-01	Impacts of Information Technology on Society	Z,ZK	3
32MC-K-UČSP-01	Role of Teachers in Modern Society	ZK	3
32ME-K-PRSK-01	Presentation and Communication Skills	ZK	4
BDUM-AZS	Signal analysis and processing	Z,ZK	6
The course covers both analog input-output blocks for signal transmission and processing, as well as the possibilities of subsequent digital signal processing and measured data analysis. It discusses circuit solutions for amplifiers and filters, including their design, as well as methods for processing digitized data. Students will become familiar with both theoretical principles of signal processing and contemporary means of implementation, including analog structures and algorithms for subsequent digital processing.			
BDUM-DES	Didaktika elektronické správy výuky	Z,ZK	6
BDUM-DEZ	Didaktika elektronických učebních zdrojů	Z,ZK	6
BDUM-DIP	Diploma Thesis	Z	9
BDUM-DVE	Didaktika výuky v elektrotechnických oborech	Z,ZK	6
BDUM-DVK	Didaktika výuky v kybernetických oborech	Z,ZK	6
BDUM-EPR	Elektronická praktika	Z,ZK	6
BDUM-KUI	Cybernetics and Artificial Intelligence	Z,ZK	6
The course introduces the students into the field of artificial intelligence and gives the necessary basis for designing machine control algorithms. It advances the knowledge of state space search algorithms by including uncertainty in state transition. Students are introduced into reinforcement learning for solving problems when the state transitions are unknown, which also connects the artificial intelligence and cybernetics fields. Bayesian decision task introduces supervised learning. Learning from data is demonstrated on a linear classifier. Students practice the algorithms in computer labs.			
BDUM-MLB	Microcontroller Labs	Z,ZK	6
The goal of this course is to make students acquainted with recent interesting applications, smart sensors circuits and peripherals handled by microcontrollers and to show them how to make an interesting lab experiment. In a lab students will program their own application and measure its properties. Because of usage of a programming language C it will be possible to focus on the practical part of the realization and show the pedagogical and didactic methods for experiments creation.			
BDUM-OTP	Obvodové techniky přístrojů	Z,ZK	6
BDUM-PPP	Propedeutikum pedagogické praxe	KZ	6
BDUM-ROB	Robotics in Education	Z,ZK	6
BDUM-RPP	Reflexe pedagogické praxe	Z	3
BDUM-SEM	Semester Project of Diploma Thesis	KZ	3
BDUM-SES	Senzory a zpracování signálů	Z,ZK	6
BDUM-SPP	Souvislá pedagogická praxe	KZ	15

For updated information see <http://bilakniha.cvut.cz/en/f3.html>

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