

Recommended pass through the study plan

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

Faculty/Institute/Others: Faculty of Electrical Engineering

Department:

Pass through the study plan: Kybernetika a robotika, před rozřazením do oborů

Branch of study guaranteed by the department: Common courses

Guarantor of the study branch:

Program of study: Cybernetics and Robotics

Type of study: Bachelor 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
AD0B01LAG	Linear Algebra	Z,ZK	7	28+6	Z	P
AD3B01MA1	Mathematics 1	Z,ZK	8	28+6	Z	P
AD0B36PR1	Programming 1	Z,ZK	6	14+6c	Z	P
AD3B99RO	Robots	KZ	5	7+9L	Z	P
AD3B14BPZS	Basic health and occupational safety regulations	Z	0	2+2j	Z	P
BKYRH-K	Humanitní předměty <i>AD0B16ET1,AD0B16F11,..... (see the list of groups below)</i>	Min. cours. 1	Min/Max 4/24			V

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
AD3B14BP1	Safety in Electrical Engineering 1	Z	0	4+8j	Z,L	P
AD3B02FY1	Physics 1 for KyR	Z,ZK	6	28+6L	L	P
AD0B01LGR	Logic and Graph Theory	Z,ZK	6	21+6	L	P
AD3B01MA2	Mathematics 2	Z,ZK	7	28+6	L	P
AD0B36PR2	Programming 2	Z,ZK	6	14+6c	L	P
AD3B31TES	Signal theory	Z,ZK	5	21+6c	L	P

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
BKYRH-K	Humanitní předměty	Min. cours. 1	Min/Max 4/24			V
AD0B16ET1	Ethic	AD0B16F11	Philosophy I	AD0B16HI1	History I	
AD0B16HT1	History of science and technolog ...	AD0B16MPS	Psychology	A003TV	Physical Education	

List of courses of this pass:

Code	Name of the course	Completion	Credits
A003TV	Physical Education	Z	2
AD0B01LAG	Linear Algebra	Z,ZK	7
This course covers introductory topics of linear algebra. The main focus is on the related notions of linear spaces and linear transformations (linear independence, bases and coordinates) and matrices (determinants, inverse matrix, matrix of a linear mapping, eigenvalues). Applications include solving systems of linear equations, geometry in 3-space (including dot product and cross product), and solving linear differential equations.			
AD0B01LGR	Logic and Graph Theory	Z,ZK	6
AD0B16ET1	Ethic	KZ	4
Aim of this subject is to provide the students an orientation not only in general problems of ethics but above all to offer instructions for solving various situations of human life. Essential 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 communal answers.			
AD0B16FI1	Philosophy I	KZ	4
We deal with the most important persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of philosophy and connection of old philosophical thoughts with recent problems of science, technology, economics and politics.			
AD0B16HI1	History I	KZ	4
The main purpose of this subject is to provide a historical overview and explanation of rises and developments of mass movements and totalitarian states in 20th century. The course is based on political and econom-social history with attention to philosophic and psychologic connections.			
AD0B16HT1	History of science and technology 1	KZ	4
This subject provides basic information on the development of science and technology in the world and at home from the earliest times to the present. The course is aimed primarily at explaining the significance of key levels of technology development, industrial revolutions and their impact on society.			
AD0B16MPS	Psychology	Z,ZK	4
AD0B36PR1	Programming 1	Z,ZK	6
The aim of the course is to teach the students: basic interactions with user interface and to program development system, introduction to JAVA, basic control flow structures and data structures, functions, arrays, object-oriented programming concepts, streams and files. The students are able to construct and debug a simple program in Java.			
AD0B36PR2	Programming 2	Z,ZK	6
The course moves along the understanding of programming skills from Programming 1, the aim is to design an interactive application with a graphic user interface (GUI), with knowledge of polymorphism abstract classes, interfaces, events handling, applets, user libraries, library practical application. Further students continue by the comparative way in getting acquainted in C language on the base of Java language, dynamic memory management, students are able to analyze the simple programs in C language.			
AD3B01MA1	Mathematics 1	Z,ZK	8
The aim of the course is to introduce students to basics of differential and integral calculus of functions of one variable.			
AD3B01MA2	Mathematics 2	Z,ZK	7
The subject covers an introduction to the differential and integral calculus in several variables and basic relations between curve and surface integrals. Other part contains function series and power series with application to Taylor and Fourier series.			
AD3B02FY1	Physics 1 for KyR	Z,ZK	6
The basic course of physics at the Faculty of Electrical Engineering - Physics I, is devoted to the introduction into two important areas of physics. The first one is a classical mechanics 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 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 in this course in the study of electrical circuits, theory of electrotechnical materials or radioelectronics. Apart of this, the knowledge gained in this course is required for the study of the consecutive course Physics II.			
AD3B14BP1	Safety in Electrical Engineering 1	Z	0
The purpose of the course is to give the students basic knowledge of electrical equipment and installation as to avoid danger arising from operation of it. In this way the students receive qualification of instructed person that enables them to work on electrical equipment according to the Directive of the Dean No. 1/2007			
AD3B14BPZS	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. Directive of the Dean No. 1/2007. This program is obligatory.			
AD3B31TES	Signal theory	Z,ZK	5
Course explains basic terms and methods for continuous-time and discrete-time signal and system analysis.			
AD3B99RO	Robots	KZ	5

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

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