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Course card

Name of the course/program	Intelligent robotic systems
Target audience	Management staff of the enterprise, engineer, engineer-operators, specialists
Form of training	Full - time
Direction of training	
Brief description, purpose of the program, formed competencies	The course is devoted to the methodology of creating intelligent systems and robotic complexes, knowledge representation, methods of finding solutions. Examples of creating expert systems are given. The basics of image recognition and image recognition systems, communication with a PC in natural language and speech communication systems are considered. Solutions of robotic tasks, including elements of artificial intelligence when performing technological operations, are presented.
Keywords (5 words)	intelligence, search, knowledge representation, robotics, robots
Requirements for students of the program	__.
Completion document	Certificate
Number of hours	72

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Zhangir Khan West Kazakhstan Agrarian and Technical University

APPROVE
Vice-Rector for Academic Affairs
_____ N.M.Gubashev
(Full name, signature)
«18» 02 2022 г.

CURRICULUM

Intelligent robotic systems
(name of the course, seminar, training)

for the management staff of the enterprise, engineer, engineer-operators, specialists
(specialists, audience category)

№	The content of the discipline (topic or section) Communication with computers in natural language.	Number of hours		
		Total	including	
			lecture	practical.
1 module. Creation of intelligent systems				
1	Intelligent systems	8	3	5
2	Knowledge representation systems	8	3	5
3	Methods of finding solutions	8	3	5
4	Image recognition	8	2	6
5	Speech communication systems	8	3	5
Module 2. Design of robotic complexes				
6	Methods of building expert systems	8	3	5
7	Robotic systems with artificial intelligence elements	8	2	6
8	A new generation of technological equipment	8	3	5
9	Intelligent control system of the robot machine	8	2	6
Total		72	24	48

Discussed and approved at the expanded meeting of the Higher School of Information Technology and Mechanical Engineering

Protocol № 7 " 25.02 " 2022 G.

Head of the Higher School of Information Technology: Bapiyev I.M.

Head of the Higher School of Mechanical Engineering: Kushaliyev D.K.

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Course card

Name of the course/program	Computer control technologies in robotics
Target audience	Management staff of the enterprise, engineer, engineer-operators, specialists
Form of training	Full - time
Direction of training	
Brief description, purpose of the program, formed competencies	The course studies standard and hardware-software tools for solving problems in the field of automation of technological processes and production, the theoretical foundations of the organization of functional and interface connections of computing systems with objects of robotic systems.
Keywords (5 words)	computing systems, architecture, robotic systems, controllers, communication with the object.
Requirements for students of the program	__.
Completion document	Certificate
Number of hours	72

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Zhangir Khan West Kazakhstan Agrarian and Technical University

APPROVE
Vice-Rector for Academic Affairs
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(Full name, signature)
«28» 02 2022 г.

CURRICULUM

Computer control technologies in robotics

(name of the course, seminar, training)

for the management staff of the enterprise, engineer, engineer-operators, specialists

(specialists, audience category)

№	The content of the discipline (topic or section) Communication with computers in natural language.	Number of hours		
		Total	including	
			lecture	practical.
1 module. Arithmetic basics of PC operation				
1	The principle of "open" architecture. IBM PC compatible computers.	8	3	5
2	Processors: purpose, main types, architecture	8	3	5
3	System interfaces and interfaces of external devices.	8	3	5
4	Distributed computing systems. Computing systems in control systems of mechatronic and robotic systems.	8	3	5
5	Automation and control systems of robotic systems. The hierarchical structure of the automated control system.	8	2	6
Module 2. Controls in robotics				
6	Control computers of robotic systems.	8	3	5
7	Industrial computers and programmable logic controllers.	8	2	6
8	Communication devices with the object.	8	3	5
9	The main types of USO, principles of organization, inclusion schemes.	8	2	6
Total		72	24	48

Discussed and approved at the expanded meeting of the Higher School of Information Technology and Mechanical Engineering

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