

Management In Technical Systems (Systems and concepts Multi-D control of nuclear installations)

National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)

Degree or qualification is awarded: **Researcher. Lecturer-researcher**

Language of study: **Russian, English**

Mode of study: **full-time**

Duration: **4 years**

Availability of free education: **yes**

Price: **325 000 rubles per year**

Programme curator: **Dr.Vladimir L. Kishkin**

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Basic department: Automation (№ 2)

Head of the program: V.L. Kishkin, Deputy Chief Designer of Federal State Unitary Enterprise All-Russia Research institute of Automatics, Head of the Department of Automatics MEPhI, Dr.Vladimir L. Kishkin

Goals of the Program

Main purpose of the Post Graduate Program is training highly qualified specialists for the enterprises and organizations of SC Rosatom in the field of monitoring, control and automation of nuclear facilities and nuclear power plants.

Characteristics of the scope and objects of professional activity of future graduates

The field of professional activity includes: development of new methods of information managing and processing, search for new technological solutions in designing of monitoring and control systems of technical objects; research in the field of control theory, artificial intelligence methods, control technologies of physical and technological parameters, control and safe operation of technological installations and engineering systems, including physical installations and nuclear power plants.

Objects of the professional activity

The following objects are the main ones for future professional activity of the specialists post graduated from the Program "Control in Engineering Systems": nuclear facilities, nuclear physics and physical installation and the means for its safe operation; systems of monitoring, control, automation and technical diagnostics of technical objects, physical installations and nuclear power plants, including the information-measuring, executive and control modules, software and hardware of information-measuring systems, control and automation; their mathematical, algorithmic, information and software components; methods and tools for design, modeling, experimental investigation, verification and validation of design solutions, design and creation of equipment of monitoring and control systems of nuclear reactors and power plants using modern instrumentation systems of engineering analysis and design; theoretical and experimental studies of control systems of technical objects for various applications.

Brief description of the curriculum

The main feature of the educational process of preparation is the fundamental physical and mathematical and engineering training, which allows you to master the main basic and special disciplines. The research work of students is carried out in close connection with work carried out at the department and research organizations State Corporation "Rosatom" and other organizations engaged in activities in the field of technical systems, such as VNIIA, VNIIAES, SNIIP, NIKIET. The department graduates receive fundamental training for a wide range of problems, such as the design of control systems and the safe operation of nuclear power plants.

The base of industrial and/or scientific practice and employment

Russian research centres; enterprises of SC "Rosatom", JSC "Concern "Rosenergoatom".

Specializations within this programme