Information Security (Methods and protection means of information in the systems providing data security, storage, processing and transmission)

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**

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Basic department: Cryptology and Discrete Mathematics (№ 42)

Goals of the Program

The aim of the educational program is to provide the student with knowledge in humanitarian, social, economical, mathematical areas and science, to train a post-graduate student that ia able to work in the area of information security, data processing, mathematical modelling of information security tools, effective application of computer engineering, software development and other areas of applied mathematics and computer science. Post-graduate student should have universal skills that lead to his social mobility and steadiness at a labour-market.

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

Professional activity of future graduates concernes with science and technology deals with research, development, modification and application of models, methods, technologies, information security tools; with information security of objects and information transfer and handling in all human activities in case of internal and external threats; with information security education.

Objects of the professional activity

Objects of professional activity of graduates are: infomatization objects, automated systems, intelligent systems, telecommunication systems, networks and other information systems and included technical and software tools; secured automated systems; methods and techniques of information security; methods of examination and design of protected information systems; models and techniques to process, gain and transfer secured information; methods of information security management; systems and tools of intelligence counteraction; methods to control and analyse properties of secured information; information security education; information security methods based on quantum mechanics; cloud computing security; audit of information security of intelligent city infrastructure.

Brief description of the curriculum

The basic part of modules concerns with the post-graduate examination and are mandatory for all post-graduates. Choosen part of modules concerns with research and educational areas and are mandatory for all post-graduates too. The second part 'Practice' includes research and professional areas, e.g. teaching practice. The third part "Research" includes the preparation of PhD thesis. The forth part 'Federal final certification' includes the preparation for federal examination and scientific report on the research carried out.

The base of industrial and/or scientific practice and employment: Federal Security Service of the Russian Federation, Eleron Special Scientific and Production Association, Infotecs, CROC, Atombezopasnost, Atlas, Positive Technologies Company, Greenatom, KRIPTO-PRO, etc.

Specializations within this programme