Engineering computer modeling in the nuclear industry

National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)

Degree or qualification is awarded:

Master degree

Language of study: **Russian**
Mode of study: **full-time**
Duration: **2 years**
Availability of free education: **yes**
Price: **207 610 rubles per semester**

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Goals of the program: training of specialists of a wide profile, capable to apply the knowledge in various areas of engineering and information technologies. The narrow-purpose direction is training of specialists for performance of settlement maintenance of the power equipment of nuclear installations in part of ensuring integrity and reliability of designs.

Sphere of the professional activity: designing and application of installations and systems in the field of development and research of functional and constructional materials; development of settlement models and program complexes for strength researches of perspective types of nuclear power installations, fuel elements and TVS, fuel and constructional materials; creation and application of installations and systems for carrying out the pilot studies aimed at providing strength safety of nuclear installations and their elements; development of reasonable criteria and an assessment of risks for safe work of nuclear and physical installations of different function; - ensuring nuclear, radiation and strength safety of nuclear and physical installations and monitoring systems and automated management of them.

Objects of professional activity: nuclear reactors and power installations; functional and constructional materials of nuclear reactors; program complexes and mathematical models for theoretical and settlement and analytical research of the phenomena and regularities in the field of nuclear power; models and installations for experimental researches of the phenomena and regularities of behavior of materials and elements of designs in the field of nuclear power; safety of objects and installations of the nuclear industry and power; environmental monitoring of environment.

Features of the curriculum: training of masters according to this program develops at them the relation to computer engineering modeling, as to synthetic discipline in which data from thermophysics, heating engineers, hydrodynamics engineers and resistance of materials are used. Part of the curriculum is also implemented in English.

The base of industrial and/or scientific practice and employment: JSC "NIKIET", Keldysh Institute of Applied Mathematics.

Head of progam: Soldatov Alexey A., Advisor to the Rector of the "Moscow State University of Lomonosov"

Specializations within this programme

Nuclear physics and technologies

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power; safety of objects and installations of the nuclear industry and power; environmental monitoring of environment.