

Advanced Technologies in Information Systems Modelling

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: **156 000 rubles per semester**

Programme curator: **V.E. Wolfengagen**

Tel.: **Contact name: Olga N. Petukhova, Phone number. +74957885699, ext. 8045.**

E-mail: ONPetukhova@mephi.ru

Goals of the Program

Training IT specialists with the Master degree, capable to research, develop and apply new computational models for information processes. The processes occur and are executed under conditions of rapidly changing infrastructure in high-tech branches of science and industry.

Basic department

Cybernetics (No. 22)

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

Software development at industrial scale for information and computation systems of various purposes. In particular, software development in high-tech state organizations, as well as industrial and business enterprises, dealing in designing, development, implementation and usage of information systems and software products:

- enterprises - parts of the state corporation "Rosatom";
- computing centers and data-processing centers;
- research-and-production collaborations;
- organizations within the system of higher and secondary education.

Objects of the professional activity

- methods and algorithms for data processing and information and computation systems;
- parallel, high-performance and distributed information and computation systems;
- processes for industrial-grade software testing and verification;
- programming languages and compilers;
- network protocols and services;
- operating systems.

Brief description of the curriculum

Our curriculum provides advances training in various areas of discrete mathematics; intelligent systems and databases; development technologies for various cybernetic systems. Part of the curriculum is also implemented in English. Our graduates develop sound skill for computational thinking, which, in turn, enables employment of modern, cutting-edge methods and technologies of software engineering in the field between practical skills and fundamental principles of computing. Our students are directly involved, since the 1st semester, in conducting research and practice work. The students work as part of science teams at the department and organizations (according to his or her selected specialization).

The base of industrial and/or scientific practice and employment

JSC "NIKIET", FSUE VNIIA, NRNU MEPhI, FSUE RFNC - VNIIEF, Kurchatov Institute, LANIT group of companies, IC,

Yandex, etc.

Specializations within this programme

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- programming languages and compilers;
- network protocols and services;
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