

# Đại học Tổng hợp Nghiên cứu Hạt nhân Quốc gia MEPHI



Year of foundation: **1942**

Total students: **7 064** / Foreign students: **1 249**

Faculties: **12** / Departments: **76**

Teachers: **1 503**

Professors	Associate Professors	Doctors of Science	Candidates of Science	Foreign teachers
<b>512</b>	<b>649</b>	<b>461</b>	<b>759</b>	<b>223</b>

Main educational programmes for foreigners: **177**

Bachelor's programme	Master's programme	Specialist programme	Training of highest qualification personnel
<b>55</b>	<b>68</b>	<b>23</b>	<b>31</b>

Additional educational programs for foreigners: **13**

Pre-university training programmes	Russian as a foreign language	Short programmes	Other programmes
<b>1</b>	<b>1</b>	<b>11</b>	

The history of the National Research Nuclear University MEPHI (Moscow Engineering Physics Institute) began with the foundation in 1942 of the Moscow Mechanical Institute of Ammunition. The leading Russian nuclear university MEPHI was later established there and top Soviet scientists, including the head of the Soviet atomic project Igor Kurchatov, played a part in its development and formation. Six Nobel Prize winners have worked at MEPHI over the course of its history - Nikolay Basov, Andrei Sakharov, Nikolay Semenov, Igor Tamm, Ilya Frank and Pavel Cherenkov.

**Today, MEPHI is one of the leading research universities of Russia, training engineers and scientists in more than 200 fields. The most promising areas of study include:**

- Nanomaterials and nanotechnologies;
- Radiation and beam technologies;
- Medical physics and nuclear medicine;
- Superconductivity and controlled thermonuclear fusion;
- Ecology and biophysics;
- Information security.

In addition, future managers, experts and analysts in the fields of management, engineering economics, nuclear law and international scientific and technological cooperation study at MEPHI.

**Programmes at MEPHI:**

- **Meet international standards for quality of education.**

Since 2014, the university has been implementing standards of the CDIO Initiative for modernising engineering training in higher education. The standards aim to improve the quality of the next generation of engineering graduates and are also used by leading world universities such as Stanford University, California State University and Massachusetts Institute of Technology.

- **Are accredited by the FEANI (Federation of National Engineering Associations) and Agency for Accreditation of Engineering Education Programmes (ANO APIO).**

A graduate who studied under an accredited programme and has the necessary professional experience can obtain the rank (international certificate) of Euroengineer.

### **MEPhI students are guaranteed the following:**

- A credit-based and modular study system (study programme consists of modules and units).
- A student can devise their own individual trajectory and take some of the modules at a partner university with established joint educational programmes. The ECTS (European Credit Transfer and Accumulation System) is used; upon completion of studies, an appendix to the European diploma indicating the number of credits and grades on the ECTS scale in each subject may be issued to a student.
- Internships at distinguished academic centres and laboratories around the world.
- Double degree programmes.
- International academic mobility programmes.

A unique feature of MEPhI is its combination of teaching, research and innovation. Students are involved in research from the very beginning of their studies, and from third year participation in research projects is mandatory. Final year undergraduates, master's students and postgraduate students conduct research in the university's laboratories, departments and scientific centre.

World-class scientific centres are long-standing foreign partners of the university: European Centre for Nuclear Research (CERN, Switzerland), Brookhaven National Laboratory (BNL, USA), Los Alamos National Laboratory (LANL, USA), Lawrence Livermore National Laboratory (LLNL, USA), Enrico Fermi National Accelerator Laboratory (Fermilab, USA), the German Electron Synchrotron (DESY, Germany), Institute of Astrophysics of the Max Planck Society (Germany), the European Synchrotron Radiation Facility (ESRF, Grenoble, France), the International Thermonuclear Experimental Reactor (ITER, France), the Academic Medical Centre (the Netherlands), the High Energy Accelerator Research Organisation (KEK, Japan), the National Institute of Nuclear Physics (INFN, Italy) and others.

MEPhI participates successfully in major scientific collaborations: ALICE on the large hadron collider (CERN), STAR and PHENIX (Brookhaven National Laboratory, USA), GLUEX (Jefferson Laboratory, USA), FAIR (Germany), BELLE, BELL II and ILC (Japan), NA 61/ SHINE (CERN), and DARKSIDE (Italy). In 2014-2015, it took part in new collaborations with CMS, AMANDA, SHIP and ICECUBE. In addition, MEPhI participates in major scientific collaborations at the DESY synchrotron centre, Russian-Italian collaboration in the PAMELA and ARINA experiments, the Russian-European experiments KORONAS and PHOTON, and the international experimental thermonuclear reactor ITER.

Among Russian organisations, strategic partners of MEPhI in the sphere of high technologies, ensuring world-class research and development, include: Rosatom State Corporation, Joint Institute of Nuclear Research (OJJaI) (Dubna), OJSC TVEL, National Research Centre Kurchatov Institute, OJSC Sukhoi Company TRINITI (Troitsk), P.N. Lebedev Physics Institute of the Russian Academy of Sciences, Institute for Nuclear Research of the Russian Academy of Sciences, Nuclear Safety Institute of the Russian Academy of Sciences Joint Institute for High Temperatures of the Russian Academy of Sciences (JIHT), Federal State Unitary Enterprise Russian Federal Nuclear Centre All-Russian Research Institute of Experimental Physics (RFNC ARRIEP), IPG IRE-Polus, Ministry of Industry and Trade of RF, NRC The

Kurchatov Institute, Joint Stock Company Radio Engineering Corporation Vega, FSUE RPC Istok, Federal Financial Monitoring Service, CJSC Moscow Centre of Spark Technologies (MCST), LLC Accord-TSHM and others.

## Student successes

### Famous graduates

<b>Igor Pushkarev</b>	Politician and former senator. Mayor of Vladivostok since 2008.
<b>Vladimir Mamontov</b>	Noted Russian journalist. President of the editorial board of Izvestiya newspaper – one of Russia's top national publications.
<b>Felix Azhimov</b>	Philosopher and lecturer. Author of over 50 research papers. The youngest Doctor of Sciences (Philosophy) in Russia. Head of the School of Humanities at FEFU.
<b>Ilya Lagutenko</b>	Noted Russian rock musician and frontman of the band Mummy Troll. Visiting lecturer at FEFU.

### Positions in international ratings

<b>Year</b>	<b>Rating</b>	<b>Position</b>
<b>2019</b>	THE Physical Sciences	78
<b>2019</b>	QS World University Ranking	329
<b>2019</b>	QS Physics & Astronomy	51-100
<b>2019</b>	QS Computer Science & Information Systems	401-450
<b>2019</b>	QS Emerging Europe & Central Asia	26
<b>2019</b>	QS University Rankings: BRICS	30
<b>2019</b>	QS Electrical & Electronic Engineering	301-350
<b>2019</b>	QS Natural Sciences	165
<b>2019</b>	QS Material Sciences	301-350
<b>2019</b>	QS Engineering & Technology	290
<b>2019</b>	THE World University Rankings	351-400
<b>2019</b>	THE Computer Science	201-250
<b>2019</b>	THE Engineering & IT	401-500
<b>2019</b>	THE BRICS & Emerging Economies	16
<b>2019</b>	ARWU Physics	101-150
<b>2019</b>	ARWU Instrument Science & Technology	151-200
<b>2019</b>	ARWU Energy Science Engineering	401-500
<b>2019</b>	U.S. News & World Report Physics	76
<b>2019</b>	U.S. News & World Report	419
<b>2019</b>	Webometrics	764
<b>2017</b>	U.S. News & World Report Physics	117
<b>2017</b>	U.S. News & World Report	411
<b>2017</b>	ARWU Physics	201-300
<b>2017</b>	THE BRICS & Emerging Economies	19
<b>2017</b>	THE Physical Sciences	84
<b>2017</b>	THE World University Ranking	401-500
<b>2017</b>	QS University Rankings: BRICS	50
<b>2017</b>	QS Emerging Europe & Central Asia	25

<b>Year</b>	<b>Rating</b>	<b>Position</b>
<b>2017</b>	QS Mathematics	351-400
<b>2017</b>	QS Physics & Astronomy	51-100
<b>2017</b>	QS World University Ranking	373
<b>2016</b>	QS Physics & Astronomy	51-100
<b>2016</b>	QS World University Ranking	401-410
<b>2016</b>	QS University Rankings: BRICS	50
<b>2016</b>	QS Emerging Europe & Central Asia	25
<b>2016</b>	QS Electrical and Electronics	251-300
<b>2016</b>	QS Mathematics	301-400
<b>2016</b>	THE Best Universities in Europe	202
<b>2016</b>	THE BRICS & Emerging Economies	19
<b>2016</b>	U.S. News & World Report Physics	117
<b>2016</b>	U.S. News & World Report	411
<b>2016</b>	ARWU Electrical and Electronics	301-400
<b>2016</b>	THE Physical Sciences	36
<b>2015</b>	THE Physical Sciences	95
<b>2015</b>	THE World University Rankings	251-300
<b>2015</b>	QS Emerging Europe & Central Asia	22
<b>2015</b>	QS University Rankings: BRICS	51
<b>2015</b>	QS Physics & Astronomy	51-100
<b>2015</b>	QS World University Ranking	501-550
<b>2015</b>	THE BRICS & Emerging Economies	26

## **Positions in Russian ratings**

<b>Year</b>	<b>Rating</b>	<b>Position</b>
<b>2019</b>	The Three University Missions	5
<b>2019</b>	RAEX (Expert RA)	3
<b>2019</b>	RUR (Technical Sciences)	228
<b>2019</b>	RUR (Social Sciences)	357
<b>2019</b>	RUR (Life Sciences)	414
<b>2019</b>	RUR (Natural Sciences)	52
<b>2019</b>	Interfax (Engineering, Technology and Technical Sciences)	2
<b>2019</b>	Interfax (Mathematics & Natural Sciences)	2
<b>2019</b>	Interfax	2
<b>2018</b>	"Social Navigator" University Demand Ranking (Technical Universities)	1
<b>2017</b>	Interfax	2
<b>2017</b>	RAEX (Expert RA)	3
<b>2016</b>	"Social Navigator" University Demand Ranking	1
<b>2016</b>	RAEX (Expert RA)	3
<b>2016</b>	Interfax	2
<b>2015</b>	Interfax	2
<b>2015</b>	RAEX (Expert RA)	3

## **International partnership**

### **Cooperation with Leading Universities of the World:**

- Massachusetts Institute of Technology (USA)
- Texas A&M University (USA)
- University of Nebraska-Lincoln (USA)
- Tokyo Institute of Technology (Japan)
- University of Surrey (UK)
- Ghent University (Belgium)
- University of Twente (Netherlands)
- Tsinghua University (China)
- Beijing Institute of Technology (China)
- Harbin Institute of Technology (China)
- University of Tübingen (Germany)
- University of Illinois (USA)
- University of Applied Sciences of Regensburg (Germany)
- University of Nantes (France)
- Polytechnic University of Turin (Italy)
- University Savoie Mont Blanc (France)
- University Joseph Fourier Grenoble I (France)
- University of Santiago de Compostela (Spain)
- Federal University of Espírito Santo (Brazil)

etc.

### **World Level Science Research:**

#### **Switzerland**

- Large Hadron Collider (experiments ATLAS, ALICE, CMS, NSW, SHIP, NA61/ SHINE (CERN));

#### **USA**

- Experiments STAR, PHENIX, LZ, COHERENT;

#### **Germany**

- FAIR— Facility for Antiproton and Ion Research, XFEL (DESY), HADES (CSI);

#### **Japan**

- BELLE, KEK, T2K;

#### **France**

- ITER - International Thermonuclear Experimental Reactor;

#### **Italy**

- ICECUBE, PAMELA;

#### **Russia**

- NICA — Nuclotron-based Ion Collider Facility;
- PIK Reactor - Research Nuclear Neutronique Reactor;
- MARS— Multiturn Accelerator-Recuperator Source of Synchrotron Radiation;
- PEARL — Petawatt Laser Complex;
- VEPP-2000— Electron-Positron Collider.

## **Olimpiads**

### **Preparatory department for foreign applicants**

#### **Preparatory department for Bachelor's programme**

#### **Preparatory department for Bachelor's and Specialist's programs**

Training is conducted at the Obninsk Institute of Nuclear Power Engineering (Obninsk) and MEPHI (Moscow). The following disciplines are studied: Russian language, Physics, Chemistry, Biology and Informatics. Profiles of the Preparatory Faculty: Engineering, Economics, Humanitarian and Medical-Biological (Obninsk Institute of Nuclear Power Engineering). The Certificate (obtained upon successful passing of examinations) is accepted at all universities of Russian Federation.

*Department of Master's Program and Doctoral studies is located in MEPHI (Moscow).*

### **Support of foreign students**

International students are assisted in getting settled in the dormitory and filling out documents for their stay in Russia, etc.

In addition, there is an adaptation programme for first year students, the MEPHI: User Guide, which familiarises new students with the history and traditions of the university. It includes getting to know the group, extracurricular activities, and training in leadership, team building, etc.

### **Everyday life of foreign students**

International students are provided rooms in one of the MEPHI's comfortable dormitories (apartment, central corridor or modular type), located within walking distance of the university. Rooms usually accommodate 2-3 persons. Each student is provided with a set of furniture (table, chair, cabinet, bedside table, bed, etc.). Internet in the dormitory is provided for free. Free Wi-Fi is provided in the buildings, and wired internet is connected in central corridor rooms and apartment style dormitories.

A laundry, reading room, canteen and gym are available in all dormitories. All dormitories have security staff.

### **Leisure and sport events**

**In addition to the exciting studies under the guidance of leading Russian and foreign teachers, students at our University are enjoying a bright student life, full of impressions. The university has a Joint Student Council, with more than 200 annual projects and 45 student associations under its aegis:**

- squadron movement;
- media centre (design and photo studios, radio and TV);
- volunteer program;
- student cultural centre;

- student scientific society;
- development of University campus;
- student sport.

## Contacts

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### **International Relations Department**

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### **Foreign students faculty**

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## Branches of university

### **Obninsk Institute for Nuclear Power Engineering**

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<http://www.iate.obninsk.ru>

### **Balakovo Engineering and Technology Institute (BITI MEPHI)**

140 Chapaeva Street, Balakovo, 413853, Saratov Region, Russia

<http://www.bitl.org.ru>

### **Volgodonsk Engineering and Technical Institute (VETI MEPHI)**

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### **Dimitrovgrad Engineering and Technological Institute (DITI MEPHI)**

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