Universidade de Investigação Nacional Nuclear "MIFI" (Instituto de Engenharia Física de Moscovo)

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
512	**649**	**461**	**759**	**223**

Main educational programmes for foreigners: **177**

Bachelor's programme	Master's programme	Specialist programme	Training of highest qualification personnel
55	**68**	**23**	**31**

Additional educational programs for foreigners: **13**

Pre-university training programmes	Russian as a foreign language	Short programmes	Other programmes
1	**1**	**11**	

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 ESTS 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: ALAS 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 (OIJaI) (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

Igor Pushkarev	Politician and former senator. Mayor of Vladivostok since 2008.
Vladimir Mamontov	Noted Russian journalist. President of the editorial board of Izvestya newspaper – one of Russia's top national publications.
Felix Azhimov	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.
Ilya Lagutenko	Noted Russian rock musician and frontman of the band Mummy Troll. Visiting lecturer at FEFU.

Positions in international ratings

YEAR	RATING	POSITION
2019	THE Physical Sciences	78
2019	QS World University Ranking	329
2019	QS Physics & Astronomy	51-100
2019	QS Computer Science & Information Systems	401-450
2019	QS Emerging Europe & Central Asia	26
2019	QS University Rankings: BRICS	30
2019	QS Electricial & Electronic Engineering	301-350
2019	QS Natural Sciences	165

YEAR	RATING	POSITION
2019	QS Material Sciences	301-350
2019	QS Engineering & Technology	290
2019	THE World University Rankings	351-400
2019	THE Computer Science	201-250
2019	THE Engineering & IT	401-500
2019	THE BRICS & Emerging Economies	16
2019	ARWU Physics	101-150
2019	ARWU Instrument Science & Technology	151-200
2019	ARWU Energy Science Engineering	401-500
2019	U.S. News & World Report Physics	76
2019	U.S.News & World Report	419
2019	Webometrics	764
2017	U.S.News & World Report Physics	117
2017	U.S.News & World Report	411
2017	ARWU Physics	201-300
2017	THE BRICS & Emerging Economies	19
2017	THE Physical Sciences	84
2017	THE World University Ranking	401-500
2017	QS University Rankings: BRICS	50

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

YEAR	RATING	POSITION
2015	QS University Rankings: BRICS	51
2015	QS Physics & Astronomy	51-100
2015	QS World University Ranking	501-550
2015	THE BRICS & Emerging Economies	26

Positions in Russian ratings

YEAR	RATING	POSITION
2019	The Three University Missions	5
2019	RAEX (Expert RA)	3
2019	RUR (Technical Sciences)	228
2019	RUR (Social Sciences)	357
2019	RUR (Life Sciences)	414
2019	RUR (Natural Sciences)	52
2019	Interfax (Engineering, Technology and Technical Sciences)	2
2019	Interfax (Mathematics & Natural Sciences)	2
2019	Interfax	2
2018	"Social Navigator" University Demand Ranking (Technical Universities)	1
2017	Interfax	2
2017	RAEX (Expert RA)	3

YEAR	RATING	POSITION
2016	"Social Navigator" University Demand Ranking	1
2016	RAEX (Expert RA)	3
2016	Interfax	2
2015	Interfax	2
2015	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

All-Russian Academic Competitions	**Annually, April-May**	The competition is held in topical scientific and educational fields: • Physics; • Nuclear physics and technologies; • Information security; • Automation, electronics and nanoelectronics . The participants compete in individual and team championships, and for special nominations. Winners receive scholarships of the President of Russia, and preferential terms when enrolling in Master's Degree Programmes and Postgraduate studies at leading Russian universities.
MEPhI International	**Annually, September-December (selection round), February-March (final)**	The university holds several international academic competitions for university students: • "Nuclear physics and nuclear technologies", • "Economic security", • "Systems analysis", • "Rosatom" (10 sections – physics, nuclear power, culture and scientific and technological progress, physical material sciences, physics of the micro and macroworld, plasma physics and lasers, physics of kinetic phenomena, information security, applied molecular physics, and automation, electronics and nanostructural electronics). Students of relevant subject areas, predominantly 2nd-4th year students, are invited to take part in the competitions. The competitions are held both at the university and online through the internet portal olympic.mephi.ru.

	Junior All-Russian Contest of High School Student Research	**Junior All-Russian Contest of High School Student Research**	The competition has been held since 1998 and is organised by MEPhI and Rosatom State Atomic Energy Corporation with the participation of the Ministry of Education and Science of Russia and the Department of Education of Moscow. The purpose of the competition is to develop the design skills of students in the natural, engineering and mathematical sciences. The competition is held in six sections (physics, mathematics, chemistry, information science, biology, engineering sciences and robotic technology). High school students aged 14 and above are invited to take part in the competition. Over 1500 people take part in the competition annually. Junior is one of the Russian selection grounds of the international Intel ISEF (International Science and Engineering Fair) competition; students from 80 countries take part in it. The organising committee and the jury of the competition, in addition to leading scientists of MEPhI, includes Russian Academy of Sciences members, outstanding researchers, teachers and public figures.
	Engineering Competition for High School Students	**Annually, December-January (selection round), February (final)**	The competition is held by MEPhI with the participation of St. Petersburg Electrotechnical University LETI (St. Petersburg), Samara State Aerospace University (Samara), Moscow State University of Railway Engineering (Moscow) and Novosibirsk State Technical University (Nizhny Novgorod). Subjects – physics, engineering and technology. Competition tasks include elements of applied mechanics and mechanical engineering, theoretical thermodynamics, electrical engineering, electronics, and nuclear technologies. The goal of the competition is to stimulate young people's interest in studying engineering.
	Zvezda Multidisciplinary Engineering Academic Competition	**Zvezda Multidisciplinary Engineering Academic Competition**	The competition has been organised on instruction from the President of Russia Vladimir Putin. MEPhI is an organiser of the section on nuclear engineering and technologies.
	United Interuniversity Mathematical Olympiad	**Annually, December-January (selection round), February (final)**	One of the largest mathematics olympiads in Russia. It has been held since 2009 among high school graduates and number of participants exceed 500.

Rosatom Industry Physics and Mathematical Academic Competition	**Annually, October-January (selection round), February-March (final round)**	The competition held by MEPhI jointly with Rosatom State Atomic Energy Corporation. High school students aged 12 and above are invited to take part. Subjects – mathematics and physics. Annually, over 14,000 students take part in the Rosatom competition. The purpose of the competition is to find prospective students for technical fields. In the top 5 of the best physics and mathematics competitions in the country.

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. In 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 centere (design and photo studios, radio and TV);
- volunteer program;
- student cultural centre;
- student scientific society;

- development of University campus;
- student sport.

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