

Bauman Moscow State Technical University

Acquaintance with BMSTU



Bauman Moscow State Technical University –

national Research University of Engineering and Technology, which implements the integration of education and science in order to train highly qualified specialists.

The basic principle of the Bauman Engineering School is a combination of deep theoretical knowledge and extensive practical skills. The University trains specialists who are able to conduct developments in the field of high technologies, knowledge-intensive industries; who have knowledge in the field of economics, management, digital solutions, entrepreneurship.



RANKINGS



The only Russian educational
institution
in the TOP-300 QS Global World
Ranking

1 PLACE

Of the rating agency "Expert" in the demand for graduates
by employers among engineering universities

93/100 POINTS

Employer Reputation Score in engineering and Technology
in QS WUR

1 PLACE

Of the rating agency "Expert" in the field of Technical
sciences, engineering and technology

25 PLACE

In QS 230 ECCA University Rankings

HISTORY



1830

Was founded by order
of Nicholas 1
The Statute of
Moscow Craft School.



1868

Under the leadership of Victor
Della Vosa, it was transformed
into
The Imperial Moscow Technical
School.



1938

After the revolution of Nikolai
Bauman, it was renamed
The Moscow Higher Technical
School named after Bauman.



2024

In 1989 it was renamed
The Bauman Moscow Technical
University.

RUSSIAN METHOD

The "Russian method of teaching" - a combination of deep theoretical training and practical training, invented by us was the highest highest reward for an industrial exhibition in Vienna (1873), in Philadelphia (1876) and Paris (1900).

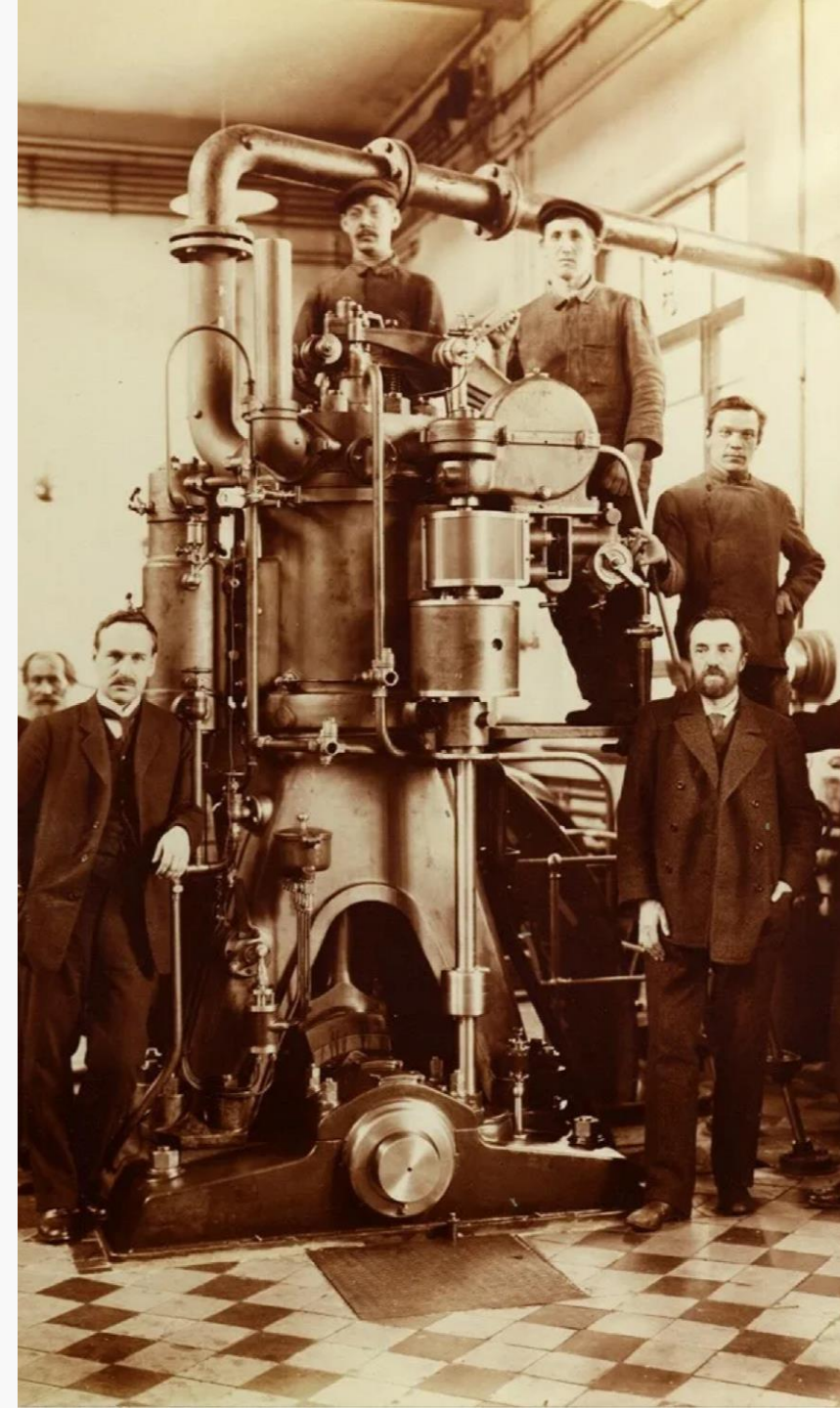
"Russia has been recognized as a complete success in solving such an important task of technical education... After that, no other system will be used in America"

G. Runckle

President of the Massachusetts
Institute of Technology



A sign in honor of the 250th
anniversary of the Russian
method of teaching



FOUNDER OF ENGINEERING EDUCATION

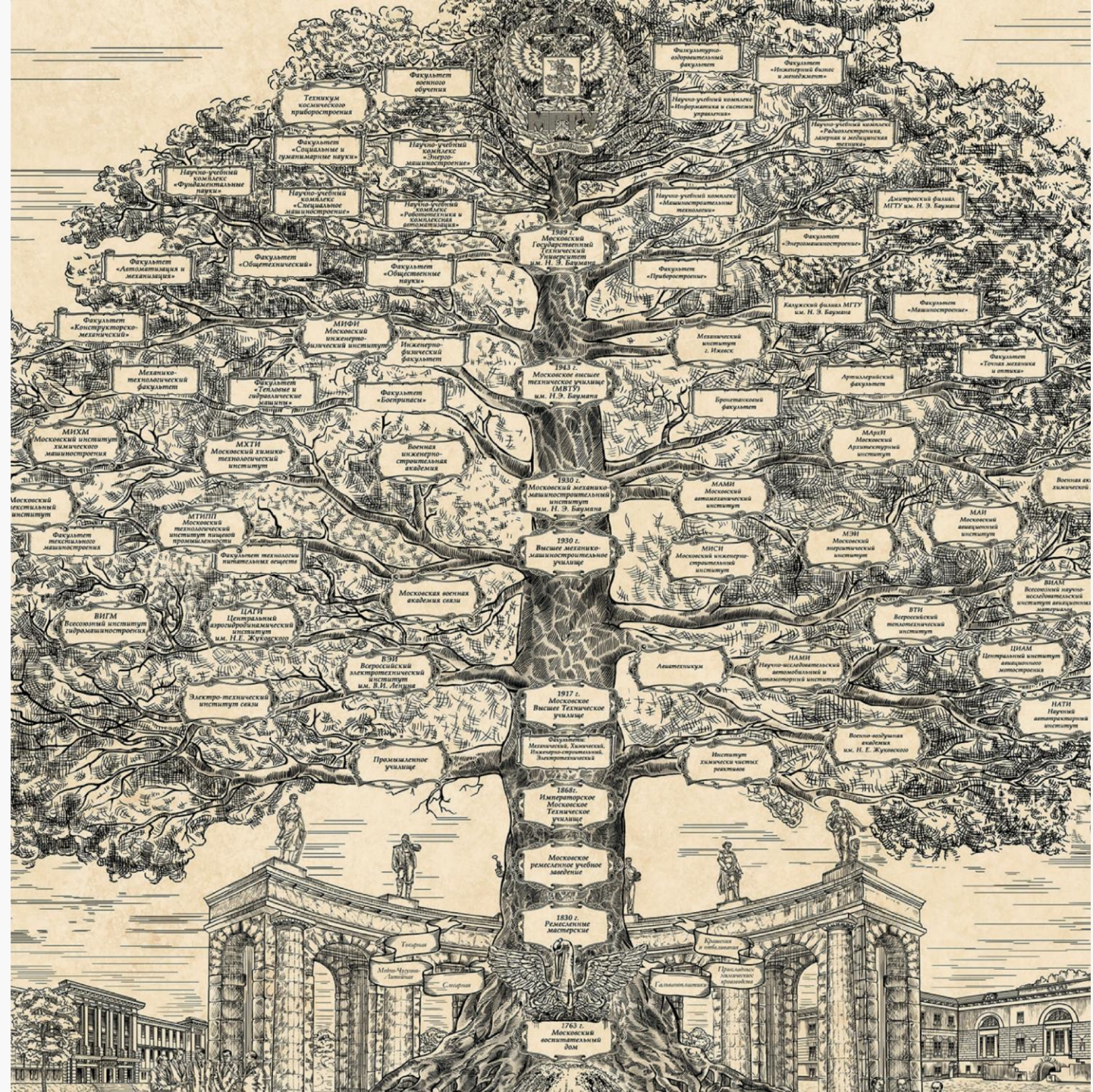
On the basis of BMSTU for med

16 higher educational institutions

8 research instituteions in Russia

For example:

- MPEI
- TsAGI
- MAI
- VIAM
- MARHI
- NAMI



FAMOUS GRADUATES

AVIATION



A. N. Tupolev

Soviet scientist and aircraft designer, general colonel engineer



P. O. Sukhoy

One of the founders of the Soviet jet and supersonic aviation

COMPUTERS



S. A. Lebedev

One of the founders of the Soviet computer industry

MILITARY EQUIPMENT



S. P. Nepobedimiy

Soviet missile weapons designer

COSMONAUTICS



S.P. Korolev

Rocket and space systems designer



D.V. Matveev

Russian cosmonaut test pilot

NUCLEAR ENERGETICS



N. A. Dollezhal

Nuclear reactor designer

BUSINESS



A.A. Cherepennikov

Russian technology entrepreneur

INFRASTRUCTURE



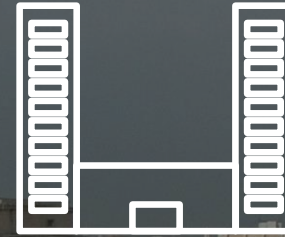
20

education building



2

branch offices



10

dormitories



23

Scientific and research
centers



college



pilot
plant



publishing
house



test facility



medical
center



sport facilities
of Olympic
reserve



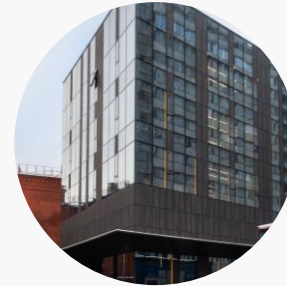
cultural
center

BAUMAN TECHNOLOGICAL VALLEY

The Bauman Technological Valley project will include:



Central quarter



Engineering center of
ground transportation and
technological systems



Technological building



Center for Biomedical
systems and Technologies

The central quarter will unite the clusters "Quantum Park", "Digital Materials Science", "Nature Protection Technologies", Bauman Digital World, federal testing center and congress center, as well as coworking, leisure, exhibition and transformable spaces for the presentation of scientific developments.

EDUCATION

28 000

students for 2023

1 500+

foreign students

At senior courses

20% – theory

80% – practice

6 course

17 faculties

5 industrial

84 point

average score

1 course

In junior courses

60% – theory

40% – practice

7 000

entrants

THE EDUCATION IS CONDUCTED

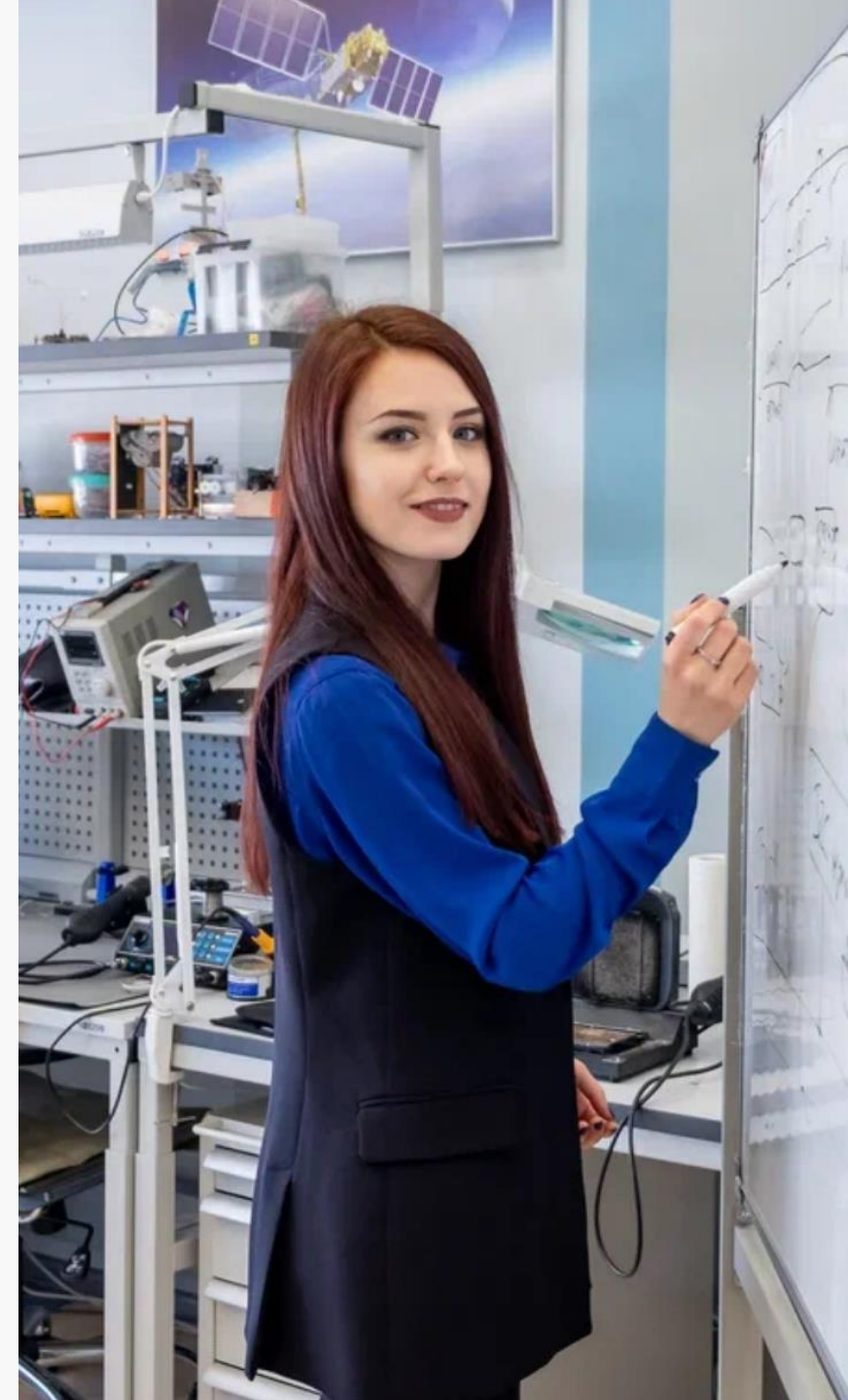
4 000+

Teachers for 2023

The main feature of our teachers is a practical orientation.
All disciplines are studied not only in theory, but also in practice.

Teaching staff:

- Practicing graduate students
- Industry Leaders
- Doctors and Professors of Sciences



University and industry communication

Head of a university Gordin M.V.

Managing Director and Member of the Management Board of SIBUR LLC, Deputy General Director of the N.E. Zhukovsky Institute, General Director of the P.I. Baranov Central Institute of Aviation Engine Engineering.



President Alexandrov A.A.

Professor, Doctor of Technical Sciences, member of the Board of the Skolkovo Foundation, member of the Interdepartmental Expert Commission on Space, member of the Council for Scientific and Technical Policy at the Ministry of Defense of the Russian Federation.



Heads of departments – general designers, heads of large industrial enterprises

Dragunov Y.G.

Director of scientific research.,
the Design Institute of Power
Engineering named after Dollezhal



Shapovalov A.B.

Director of the Central Research
Institute of Automation
and Hydraulics (IU2)



Solomonov Y.V.

General Designer "Topol-M" (IU)



Kablov E.N.

Director of the All-Russian
Institute of Aviation Materials (MT8)



Murashko M.A.

Minister of Health (BMT5)



AREAS OF RESEARCH AND DEVELOPMENT

PHOTONICS

Terahertz technologies and spectroscopy for the study of biological objects

TRL 2.4



DIGITAL MATERIALS SCIENCE

Design of new materials with improved characteristics

TRL 2.4



ARTIFICIAL INTELLIGENCE

Neural networks and ensemble machine learning algorithms in cyberphysical systems

TRL 4.7



SOFT MATTER

Controlled self-organization of soft matter in external fields, cellular and active soft matter, promising biotechnologies, fluid physics and design of phenomena in liquid



QUANTUM CALCULATIONS

Creation of computing devices based on quantum mechanics at very low temperatures

TRL 4.7



"GREEN" TECHNOLOGIES

Control of carbon balance and minimization of carbon footprint of industrial products

TRL 3.6



IONIC-PLASMA TECHNOLOGIES

Electron beam spraying of coatings for modification of surface properties of substances

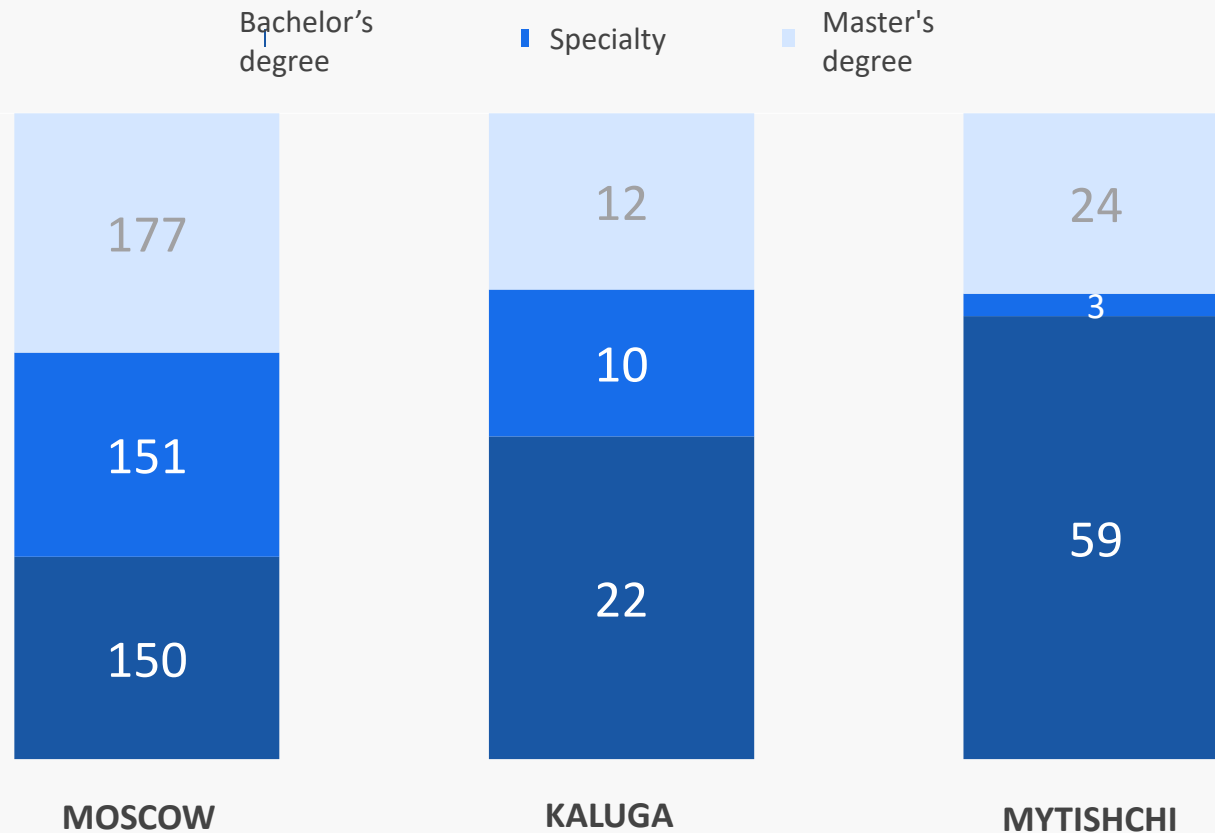
TRL 4.7



TRL 3.6

EDUCATIONAL PROGRAMS

for 2023/2024



12 225

Academic disciplines

For **8** areas of training
licenses have been obtained

4 EGSD accredited

For **140** scientific specialties
of the postgraduate school
licenses have been obtained

As of September 1 , 2022

PROGRAMS AND FACULTIES

Computer science, artificial intelligence and control systems	CS
Engineering Business and Management	EBM
Mechanical engineering technologies	MET
Special engineering	SM
Biomedical engineering	BE
Electronics and laser technology	ELT
Power engineering	PE
Robotics and complex automation	RCA
Fundamental sciences	FS
Linguistics	L
Department of "Security in the Digital World"	JUR
Social sciences and humanities	SSH
The main educational, research and methodological center	GUIMC

EXTRACURRICULAR ACTIVITIES

SPORT

More than 50

Sections on football, hockey, volleyball, swimming, synchronized swimming, shooting, biathlon, rock climbing, boxing, martial arts, cheerleading, etc.



SOCIAL ACTIVITY

Student council, student union, student construction teams, volunteer center, international communities.

Huge selection of activities and training tracks.



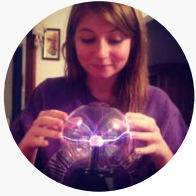
In 2017, the university team was invited to the World Festival of Youth and Students. The University was awarded [the Gratitude of the President of the Russian Federation](#) for the high-quality work of university youth.

CREATIVITY

Modern and historical dances, vocals, musical groups, theater studio, literary clubs, choir, creative evenings and festive concerts, talent and beauty shows. Our creative teams are laureates and winners of international competitions.



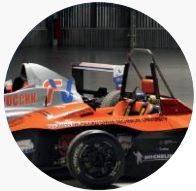
STUDENT ENGINEERING CENTERS



Experimental Physics
Laboratory SELF



Youth space Center



Formula Student

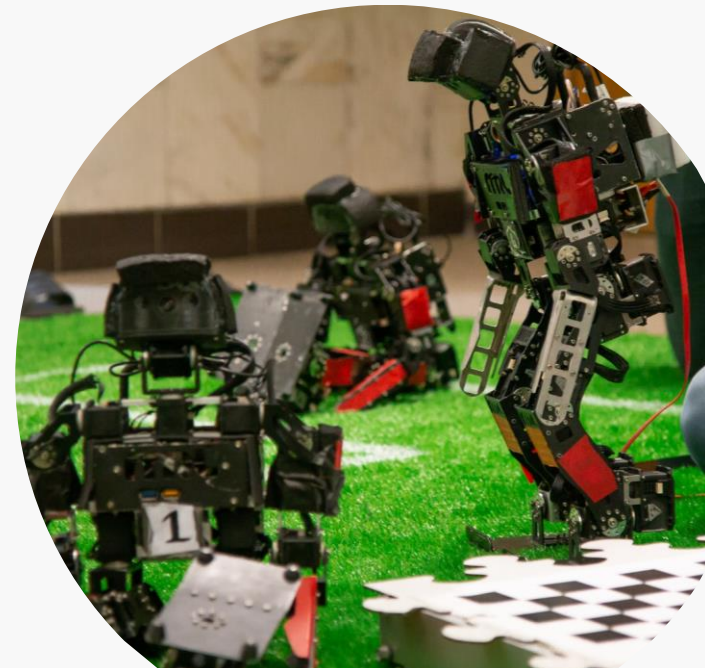


"Hydronautics" Team



VK Education

In 2019, BMSTU organized RoboCup for the Asia-Pacific region for the first time in Russia.



- Avionics
- Lon-plasma technologies
- Study of extreme situations
- Space Center Functional micro-, nanosystems
- Piston engine building and special equipment
- Supercomputer engineering modeling and software development
- Technopark of information technologies VK
- Formula Student
- Special Design and Technological Bureau of Applied Robotics
- Hydronavtics
- Center for Innovative Welding Technologies and Diagnostics
- Dual Technology Transfer Center
- Control and management of innovations
- House of Physics
- Innovative entrepreneurship and intellectual property management
- Cryology



23

Scientific and educational
centers

SCIENTIFIC PUBLICATIONS

30%

articles

Published in 1-2
quartile journals

154

points

Average Hirsch Index
in 2019

Bulletin of the BMSTU "Natural
Sciences" in the 2nd quarter of
Scopus

Proceedings of the conferences "The
Future of Mechanical Engineering",
"Royal Readings" are indexed in
Scopus

National projects

ARCTIC

The University has become the basic scientific organization for the implementation of the tasks of the interdepartmental integrated target program "Arctic Technologies". To implement these tasks, the University has created the Directorate for Arctic Programs of the Bauman Moscow State Technical University.

Partners:



5

IMPLEMENTED AREAS OF ACTIVITY:



Arctic
Medicine



Lighting of the
situation



Arctic
transport



Infrastructure and
life support system



Energy

INTERNATIONAL COOPERATION

BMSTU actively cooperates with the world's leading universities in America, Europe and China.

Double degrees

Since 1998 Bauman students have been participating in double degree programs. Upon completion of their studies, students receive 2 diplomas from two leading universities.



BMSTU is a co-founder and chairman of the Association of Russian Technical Universities and the Association of Chinese - Russian Technical Universities.



PARTNERS

The University has agreements on cooperation in the field of education and research with international and Russian companies.



Who do graduates of Bauman Moscow State Technical University work for?

23% – engineers by specialty (not IT)

20% – engineers NOT by specialty (IT)

14% – engineers by specialty (IT)

11% – engineers not by specialty (technology)

8% – managers, managers

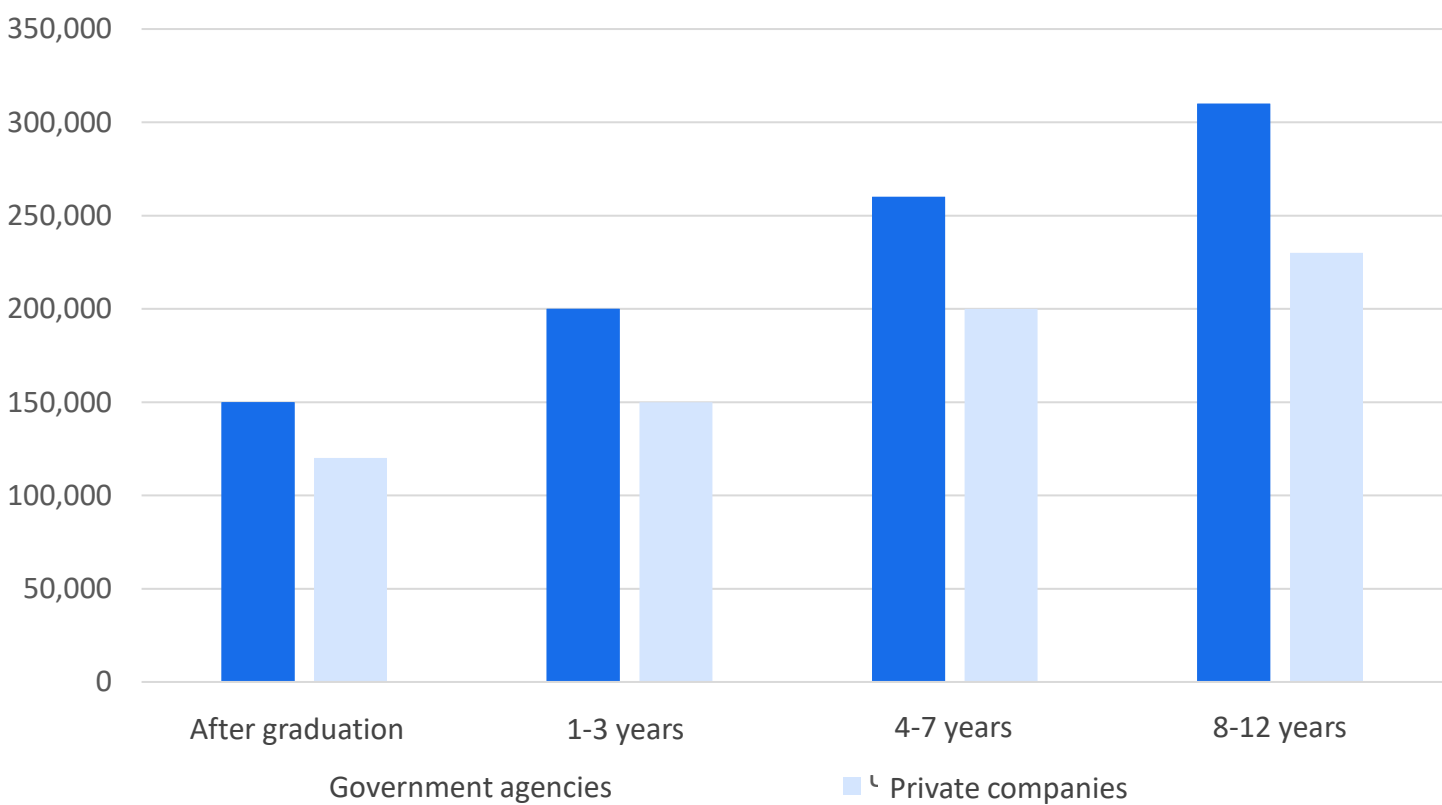
6% – financial sector

5% – in education

5% – sales

8% – in other areas

Average values of monthly salaries on the hands of graduates of Bauman Moscow State Technical University in IT directions





STAGES OF EDUCATION

Bachelor's degree (4 years)
/Specialty (6 years)

Master's degree (2 years)

Postgraduate studies (3-4 years)

FORM OF ADMISSION

Quota (scholarship)

Team conducting in the country screenings
of territories consulates

Budget form (grant)

Team conducting at the University

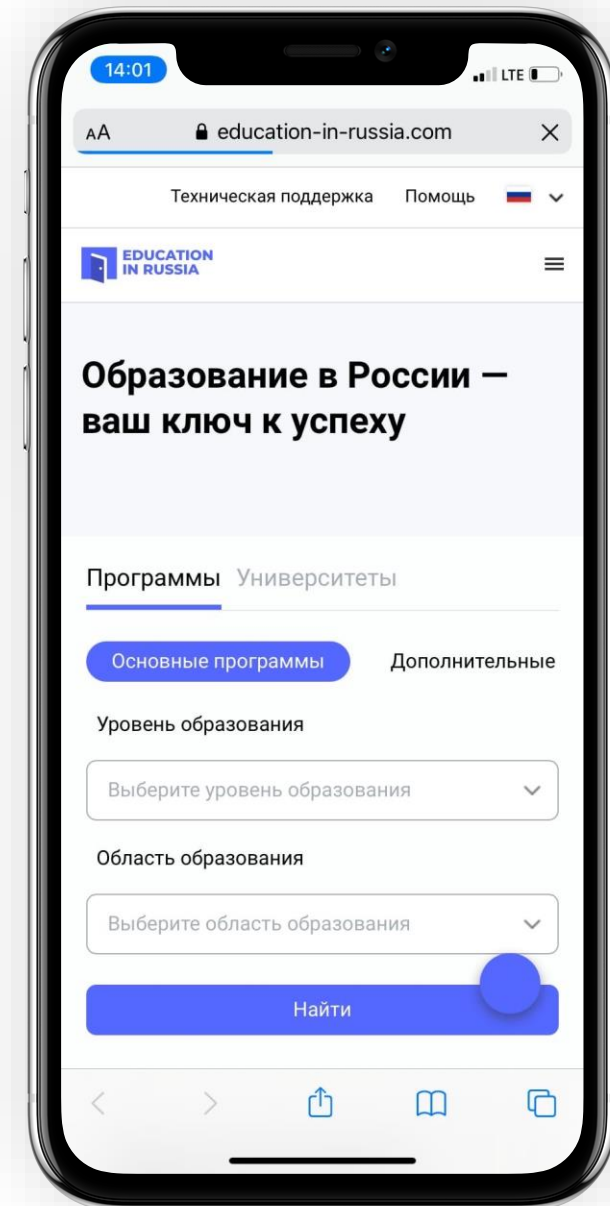
Fabric form (contract)

Team conducting at the University

- Bachelor's degree / specialization
(from 270 119 rub. per year)
- Master's degree (from 290 727 rub. per year)
- PhD (from 364 900 rub. per year)

QUOTA FOR TRAINING

- 📍 **Registration** on the website education-in-russia (<https://education-in-russia.com/>)
- 📍 Passing the **test**
- 📍 Approval of the applicant's portfolio in the University
- 📍 After approval by the university of the candidate, must come to the university to **apply documents** or send remotely
- 📍 **Information support** of Rossotrudnichestvo (<https://rs.gov.ru/>)



PRE-UNIVERSITY TRAINING

1 500+

People under go pre-university training according to the programs of BMSTU

95+

People received 100 points on the Unified State Exam in 2019

Engineering

Programs of additional training in engineering from 1st to 11th grade.
20 technical courses.

Physics and Mathematics School

Evening school for schoolchildren, organized by BMSTU students

"STEP into the future"

Every year, the Olympiad gathers and selects more than 30 thousand schoolchildren from all over the country and foreign schools.

Lycee

"Bauman Engineering School No. 1580" is annually included in the top three schools in Moscow

Children's camp "Baumanets"

Our own children's camp has been operating for more than 60 years. The spirit of the Bauman brotherhood is comprehended here

OLYMPIAD "STEP INTO THE FUTURE"

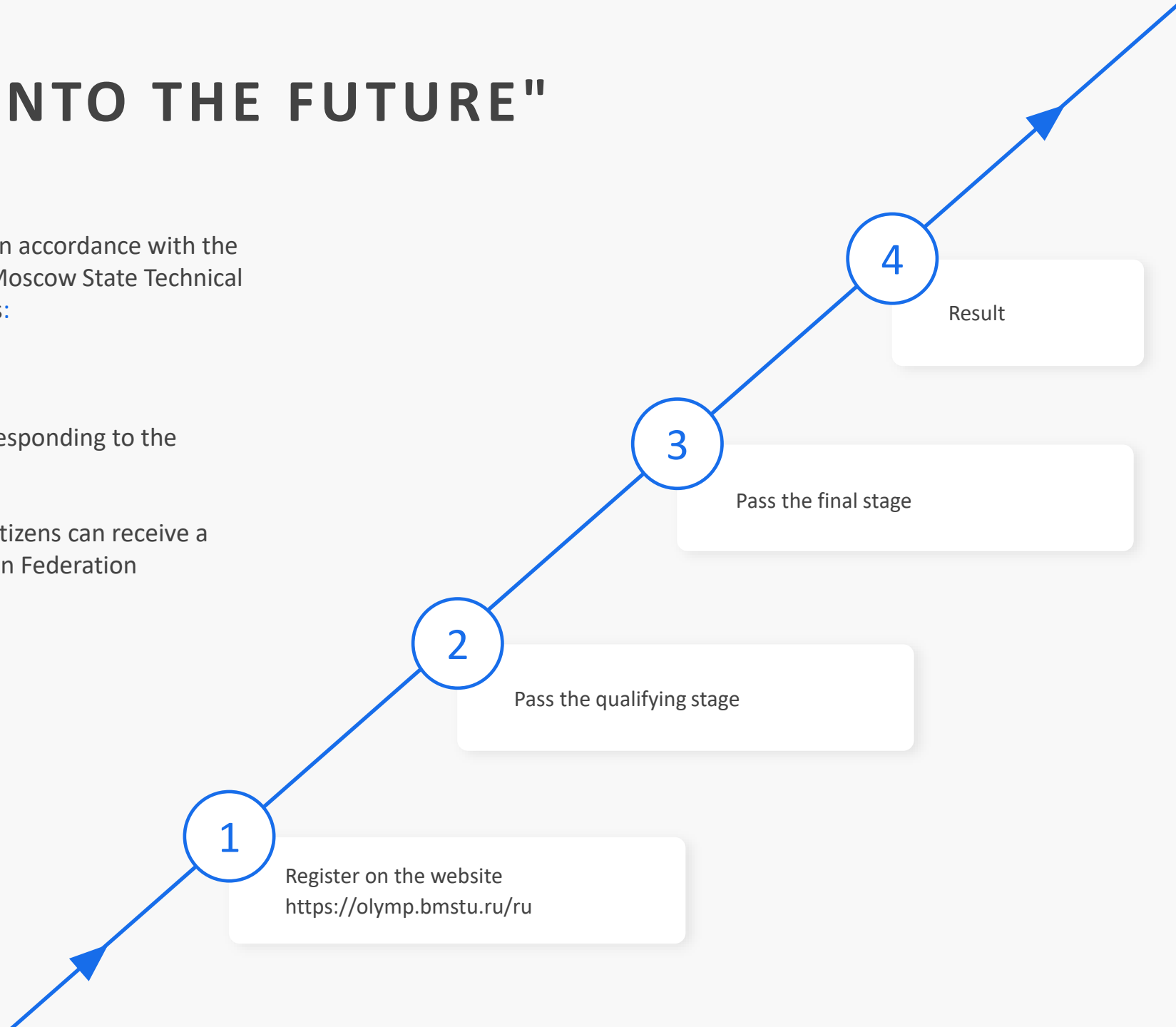
The winners and prize-winners of the Olympiads, in accordance with the decision of the Academic Council of the Bauman Moscow State Technical University, will be granted one of the special rights:

- admission without entrance tests;
- 100 points in a general education subject corresponding to the profile subject / specialization
- prize-winners / winners from among foreign citizens can receive a quota for studying at universities of the Russian Federation

Olympiad Profiles:

1. Computer science and ICT
2. Physics
3. Mathematics

The winners of the Olympiad are given a quota to study at Universities in Russia!



«TECHNOCUP»

Olympiad in [sports programming](#) for students of [grades 8-11](#)

Advantages of participating in the Technocup:

- admission without entrance tests;
- 100 points in the profile subject — computer science;
- prize-winners/winners from among foreign citizens can receive a quota for studying at universities of the Russian Federation;
- privileges for admission to educational projects VK;
- simplified selection for VK internship areas similar to the Olympiad profile after reaching the age of majority.

Schedule

The time is indicated in the Moscow
Time format (GMT +3)

**The participants have three attempts to pass
the qualifying stage**

Qualifying stage:

Round 1 – November

Round 2 – December

Round 3 - January

Final stage:

Final – March

Detailed information about the Olympiad (<https://techno-cup.ru/>)

INTERNATIONAL OLYMPIADS HELD AT BAUMAN MOSCOW STATE TECHNICAL UNIVERSITY

The Olympiad is held to identify the most gifted young people from among foreign citizens in various fields of knowledge and attract them to study at the Bauman Moscow State Technical University for [a Master's degree](#).

Citizens of foreign countries who speak Russian are invited to participate in the Olympiad.

The Olympiad is held in a distant format.

The language of the Olympiad is Russian.

Detailed information about the Olympiad
(<https://studolymp.bmstu.ru/ru/inophysics>)

Olympiad Profiles:

In physics

On life safety

On the basics of engineering design

Date of the event - April

PREPARATORY FACULTY

Admission to the preparatory course is carried out during the year. [Documents required for admission to the preparatory faculty:](#)

1. Scan of the certificate and / or diploma
2. Scan of the passport (in Russian or English), the passport must be valid for at least 1.5 years after the date of entry into the territory of the Russian Federation
3. Application form (An employee of the university will send it electronically)

The documents listed above have to be sent to the university's email address 1830@bmstu.ru

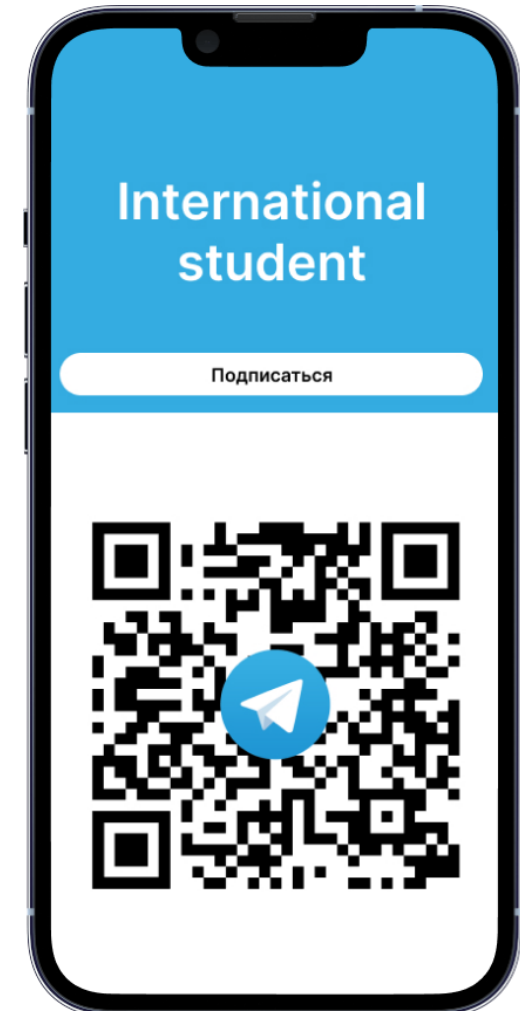
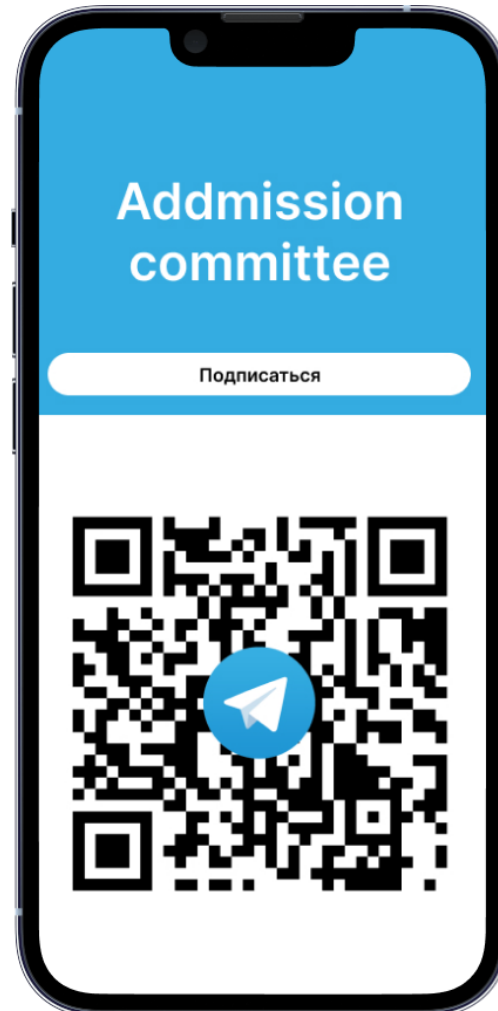
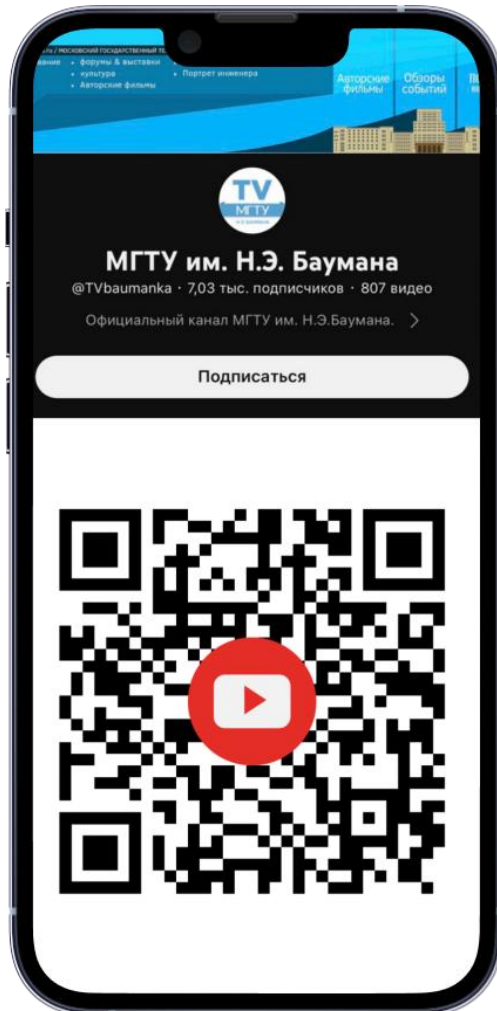
After analyzing the documents, if the admission candidate is eligible, the University sends a letter of guarantee (confirmation letter)

The training cost in the [preparatory course is 235,000 rubles \(\\$3,330\)](#). The durability of training is [1 year](#), from September 1 to June 30.

Students are distributed in groups according to the knowledge level of the Russian language.



WE ARE IN SOCIAL NETWORKS



Bauman Moscow State Technical University

Thank you!

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Email: 1830@bmstu.ru

