



NMSTU

1934 • 85 YEARS • 2019

85,000 Success Stories from Our Alumni

CONTENTS

NMSTU Rector's welcome address.....	3
Milestones.....	4
Flagship university.....	6
iSmArt Package.....	10
Research and technological engineering.....	12
Personnel engineering.....	14
Social engineering.....	16
Research and innovation.....	18
Education.....	20
International activities.....	24
Extracurricular activities.....	26
Infrastructure.....	28
Alumni.....	30



МАГНИТОГОРСКИЙ ГОСУДАРСТВЕННЫЙ ТЕХНИЧЕСКИЙ УНИВЕРСИТЕТ

С ЮБИЛЕЕМ



Dear friends,

At present, **NMSTU** is a flagship university of Russia. Over the past **85** years, NMSTU trained over **80,000** highly qualified specialists, including distinguished businessmen and political leaders. The formula for their success is a **solid academic background** obtained at our university. It is a generally accepted fact that NMSTU pays a close attention to **development of research**, progressive youth movements, creation of innovative educational programs and the social sphere, sport, promotion of the University on the market of educational services, **expansion of international relations**. We intend to build a stable foundation to continue a dynamic development of the university, maintain **a leading brand of Nosov Magnitogorsk State Technical University** by transforming it into the entrepreneurial university.

Sincerely,
Mikhail V. Chukin,
Rector

MILESTONES

**9 April
1934**

The Institute of Mining and Metallurgy was established. 233 students. 19 teachers. The first Director of the Institute was Anton M. Upenek.

1936

The Institute of Mining and Metallurgy moved into a three-storey school building.

1937

First 20 graduate engineers: 8 mining engineers, 5 steelmakers and 7 rolling mill engineers

1940

435 students, 47 teachers, including 10 PhD teachers

1941

Publishing the first collection of research papers totaling seven printed sheets

1942

Opening the Construction Department

1944

Opening post-graduate studies

1945

21 chairs, 107 teachers

1948

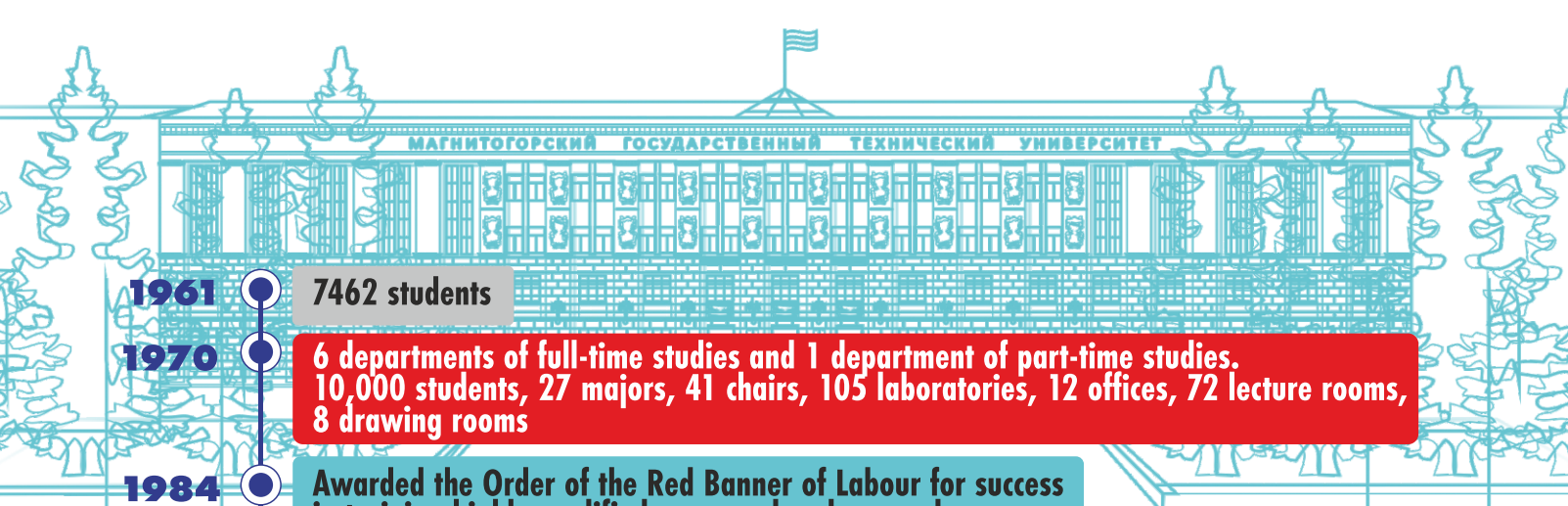
Establishment of the Student Research Society

1955

Opening the Department of Part-Time Studies. 25 chairs, 2259 students, 116 teachers, including 42 holders of a research degree

1956

Starting the construction of a new building for the Institute of Mining and Metallurgy on the right bank of the Ural River



МАГНИТОГОРСКИЙ ГОСУДАРСТВЕННЫЙ ТЕХНИЧЕСКИЙ УНИВЕРСИТЕТ

- 1961** 7462 students
- 1970** 6 departments of full-time studies and 1 department of part-time studies.
10,000 students, 27 majors, 41 chairs, 105 laboratories, 12 offices, 72 lecture rooms,
8 drawing rooms
- 1984** Awarded the Order of the Red Banner of Labour for success
in training highly qualified personnel and research
- 1994** Magnitogorsk Institute of Mining and Metallurgy
became Magnitogorsk Academy of Mining and Metallurgy
- 1998** Magnitogorsk Academy of Mining and Metallurgy
is given the status of the university, the highest status for higher education institutions
- 2010** Reorganized by joining four Magnitogorsk secondary vocational education institutions
- 2014** Reorganized by joining Magnitogorsk State University
- 2017** Awarded a status of the flagship university
- 9 April 2019** The 85th anniversary of the flagship university of the Southern Ural:
14,000 students, 2300 employees, 106 Doctors of Sciences and 502 PhDs teachers.
The Rector is Mikhail V. Chukin.



FLAGSHIP university of Russia

In 2017 NMSTU, being a university center of innovative, technological and social development of the Chelyabinsk Region and several regions of the Southern Ural, confirmed its status: according to the results of the competition held by the Ministry of Education and Science of the Russian Federation, it was among **33 flagship universities of Russia**.

The Magnitnaya Mountain (a large magnetite deposit) supported this country during World War II (every third shell and armor of every second tank during the war years were made from Magnitogorsk steel). The deposit was depleted in the 1990s. On the threshold of the next industrial revolution, the University faced a challenge of building the new "Magnitnaya Mountain" from the "alloy" of talents.

NMSTU is proud of its graduates and the fact that according to the **Forbes** ranking of Russian universities in terms of the aggregate wealth of graduate billionaires, **it ranks 13th**.

Thus, with good reason, a slogan of the flagship university is **"Magnet for talent! Towards success!"**.

NMSTU's **mission** is to develop elite entrepreneurs focused on creation of research and innovative technologies in the field of iSmArt metallurgy for development of the South Ural Region and Russia.

The NMSTU development program includes three strategic projects:

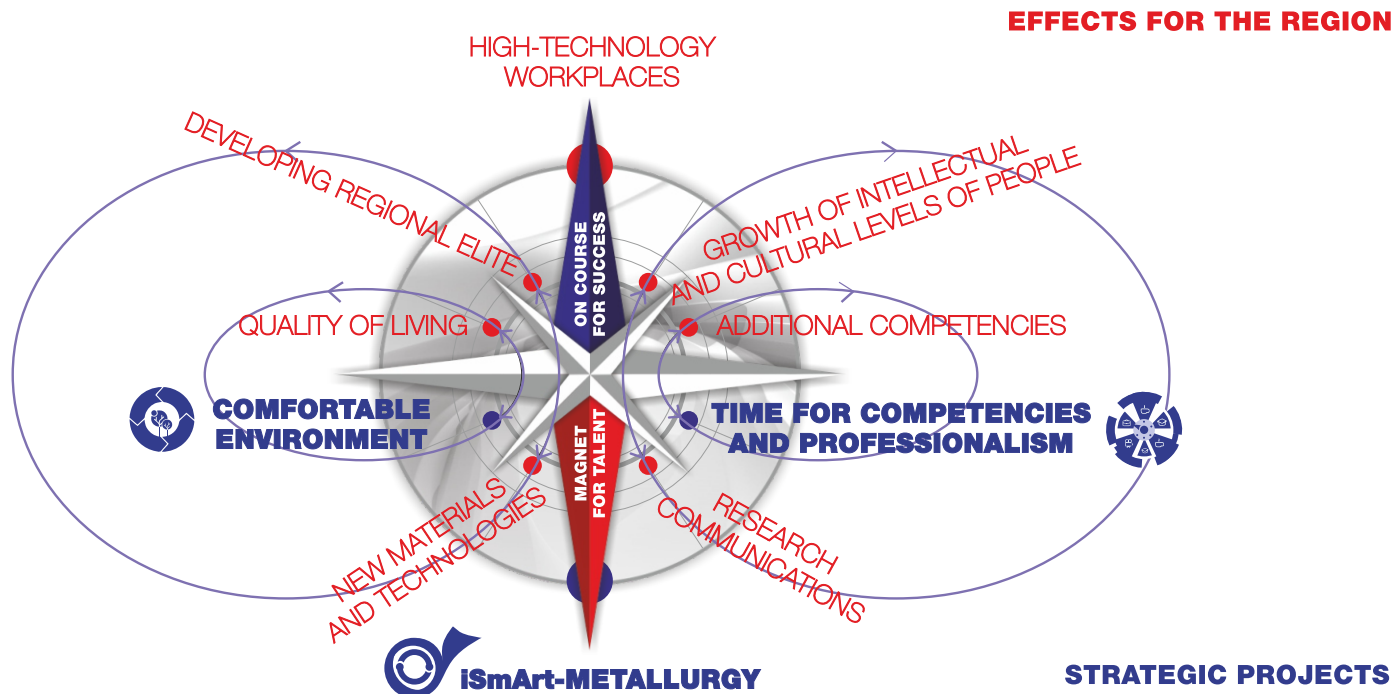
– **Time for competencies and professionalism**. The objective of the project: creation of practice-focused education environment complying with existing standards and advanced technologies to develop basic and unique competencies of students.

– **iSmArt-metallurgy** means "Intellectual metallurgy: an alloy of science and art" (**i – intellectual, S - Science; m – metallurgy**). The objective of the project: development of an innovative educational and research complex to create top smart technologies and products, by applying existing project, practice-oriented approaches to training when developing/learning new products, in the field of world metallurgy, materials processing and associated solutions in Industry 4.0 aimed at commercialization and satisfaction of a demand for new products in metallurgy, including a positive impact on social environment of the South Ural Region.

– **Comfortable environment**. The objective of the project: establishing a center of social collaboration to develop university, city and regional communities.

A strategic objective of the flagship university development is to transform the university into a center of development of breakthrough technologies and production facilities to improve competitiveness, investment attractiveness and the quality of living for people in the region.

A target model unites the slogan, brand, mission, objectives, tasks and strategic projects of the University and may be presented as follows: an attractive university in a convenient city with a system of developing elite entrepreneurs focused on creation of breakthrough technologies and production facilities in the field of advanced metallurgy, including creation of conditions of finding, selecting, training and comprehensive creative development of talents, introduction of the WorldSkills methodology and algorithms into training practice, a wide development of information environment of research and business communications.



2

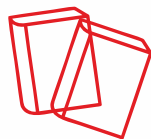
DEPARTMENTS



MULTIDISCIPLINARY
COLLEGE

9

INSTITUTES



1

BRANCH IN THE CITY
OF BELORETSK

328

HIGHER AND SECONDARY
VOCATIONAL EDUCATION
PROGRAMS

14 000

STUDENTS



THE CAMPUS UNIVERSITY
WITH TEACHING
INFRASTRUCTURE,
TOTALING

11

DORMITORIES

TOTALING

73,552.88m²

141, 040.6m²

106

DOCTORS
OF SCIENCES



6

DOCTORAL THESIS
DEFENSE
COMMITTEES

502

PhD TEACHERS

THE YOUTH TRAINING
AND RECREATION
CENTER,
TOTALING

8,958.9m²

OVER
60

COLLABORATION
AGREEMENTS

8

SPORTS FACILITIES

WITH UNIVERSITIES
OF

28



COUNTRIES

OVER

300

FOREIGN STUDENTS

FROM

10

COUNTRIES

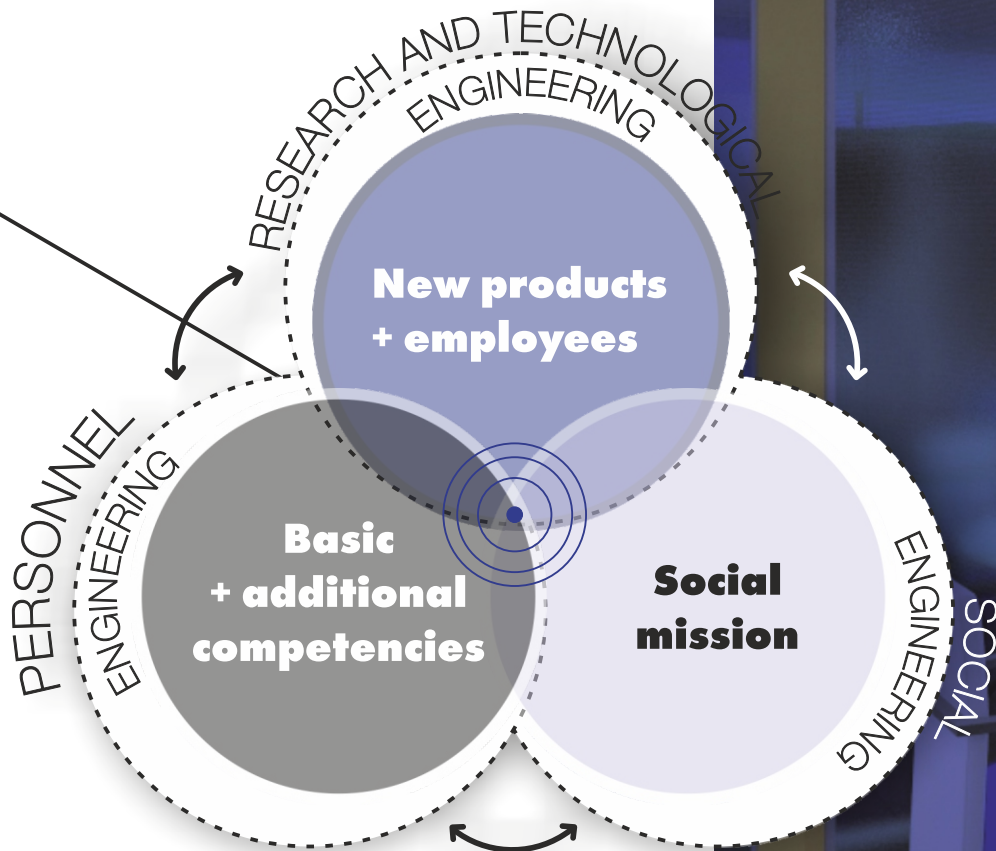
179 BUILDINGS AND 41 FACILITIES, TOTALING

265,639.78m²

iSmART Package

It is clear that in the existing market conditions a real transformation of the University is feasible via a unique product only. NMSTU determined such product to be iSmArt Package. iSmArt Package is an integrated product of many aspects of the University's activities in research and technological, personnel and social engineering. We deem engineering as a field of the intellectual activity to settle specific technical and/or social tasks. Research and technological engineering results in new innovative products and

provides new employees with research and entrepreneurial competencies (the strategic project of the University "iSmArt-Metallurgy"). Development of basic competencies among students is a task of personnel engineering, which contributes to development of a broad range of additional competencies in sport, volunteering, creative and social activities (the strategic project of the University "Time for competencies and professionalism"). A social mission is also based on social engineering of the University and implemented as part of the strategic project "Comfortable environment".



RESEARCH ENGINEERING AND TECHNOLOGICAL



Prospective
research areas
and teams

Student research

**The Student
Research
Society
and the business
incubator**

New competencies

New
business
ideas

ACCELERATION



RESEARCH AND
DEVELOPMENT

NEW PRODUCTS

- New materials and technologies
- Industrial exoskeletons
- Big Data
- Computer vision and VR
- Internet of things
- Industrial drones and others

NEW BUSINESS PROJECTS AND STARTUP COMPANIES

(SPV, JV,
INDIVIDUAL ENTREPRENEURS
AND OTHERS)

PARTNERS



НАУЧНО-ПРОИЗВОДСТВЕННОЕ ОБЪЕДИНЕНИЕ
АНДРОИДНАЯ ТЕХНИКА



НАУЧНО-
ТЕХНИЧЕСКИЙ
ЦЕНТР



وحدت صناعات الصلب
UNITED STEEL INDUSTRIES FZC



AND OTHERS

CONTINUING EDUCATION

Doctoral studies
Advanced training courses
Continuing vocational education

Bachelor's degree programs
Specialist's degree programs
Secondary vocational education
"Technical translator" course
"Technology entrepreneurship" course
Master's degree programs
PhD programs
Second higher education
Student organizations
Worker occupations
Continuing professional education

Academic Olympics in many subjects "A Path to Success"
Project school
Preparatory courses
Clubs, studios, subject-centered classes
Academic Olympics and contests
Preparatory courses for orphans and children with disabilities
Preparatory courses for foreigners

PARTNER PROGRAMS

GRADUATES



STUDENTS



*Bachelor's degree programs 4+
Enterprise-based departments
Student exchange programs
Practical training at plants
Participation in WorldSkills Russia
Employer-sponsored education*

PUPILS



*Quantorium children's technology park
Academic Olympics and contests
Preparatory courses, subject-centered classes, groups
IT classes
Employer-sponsored education*



79th in

**The project on creating
the Coworking Center,
totaling 1214.3 m²,
is under implementation, for collaboration of
talented young people and generation of ideas
in research, educational, entrepreneurial and
patriotic activities.**

NMSTU ranks
Russia
and the 3626th
in the world in the
WEBOMETRICS
ranking of the best
world universities

139

families of university teachers
and employees are provided
with social housing as part of the
program on improving housing
conditions for particularly gifted
students, young scientists,
outstanding teachers and invited
specialists

THE PROJECT AIMS TO INCREASE ATTRACTIVENESS OF THE UNIVERSITY, THE CITY AND THE REGION

11

workstations and **2** lectorium programs
for distant and electronic learning were developed
as part of the program on creating
barrier-free environment
on the University campus for people with
limited abilities and a concept
of creating centers of distant
educational technologies

over **40** **4** mini-parks and
public spaces
were created as part of the program
on introducing new
and revamping existing facilities of social
and sports infrastructure for the university
community and local citizens

RESEARCH AND INNOVATION TODAY

INNOVATION MEGAPROJECTS

In Russia

Winner of federal contests as part of Resolutions of the Government (No. 218, No. 219, No. 220)

MEGAGRANT - Laboratory of the lead scientist

OJSC MMK-Metiz - Nanostructured reinforcement bars

PJSC MMK - Arctic steels



ABROAD

United Steel Industries FZC: commissioning and development of the steel plant in the UAE



R&D for subjects of the Russian economy

Over **50 R&D** projects annually

The volume of R&D per an employer is

RUB 335.6 thousand

GRANTS

18 grants

HORIZON 2020

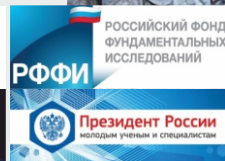
Russian Science Foundation

Russian Foundation for Basic Research

Grants awarded by the President of the Russian Federation

Innovation Promotion Fund

Including a multi-disciplinary grant for "X-ray fluorescence (XRF) spectroscopy of the alloy of the Bosphoran staters used in the 3rd-4th centuries AD; inflation processes and a financial crisis in the Bosphoran Kingdom"



LAB HUB

35 University laboratories, including

Research Institute for Nanosteels

Mechanics of Gradient Nanomaterials laboratory

Microtopography Research Center

Material On-stream Analysis Laboratory

TECH HUB

9 small innovative enterprises of the University with an annual turnover of **RUB 100 m**



THESIS COMMITTEES

D 212.111.01 Thesis Defense Committee awarding degrees of candidate of sciences and doctor of sciences in the following majors:

05.16.02 – Metallurgy of ferrous, non-ferrous and rare metals,

05.16.04 – Foundry; 05.16.05 – Metal forming

D 212.111.02 Thesis Defense Committee awarding degrees of candidate of sciences and doctor of sciences in the following majors

25.00.13 – Mineral processing,

25.00.22 – Geotechnology (underground, open pit and construction methods)

D 212.111.03 Thesis Defense Committee awarding degrees of candidate of sciences and doctor of sciences in the following majors:

05.02.09 – Forming technologies and machines,

05.02.13 – Machines, lines and processes (metallurgy)

D 212.111.04 Thesis Defense Committee awarding degrees of candidate of sciences and doctor of sciences in the following majors:

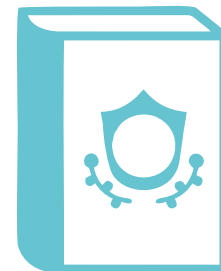
05.09.03 – Electrical complexes and systems

D 212.111.05 Thesis Defense Committee awarding degrees of candidate of sciences and doctor of sciences in the following majors:

05.16.01 – Metal science and heat treatment of metals and alloys; 05.02.23 – Standardization and quality control

D 212.111.06 Thesis Defense Committee awarding degrees of candidate of sciences and doctor of sciences in the following majors:

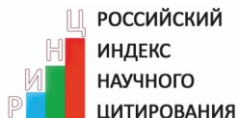
13.00.08 – Theory and methodology of vocational education



2019-2023 PROGRAM OF DOCTORAL THESIS DEFENSE BY NMSTU TEACHERS: 36 THESES

PUBLICATION ACTIVITIES

Over 4000 papers per year
in Russian and foreign journals



WEB OF SCIENCE

Scopus®



EDUCATION

Diversity **Multiple levels** Continuity



Metallurgy, machine building
and material processing

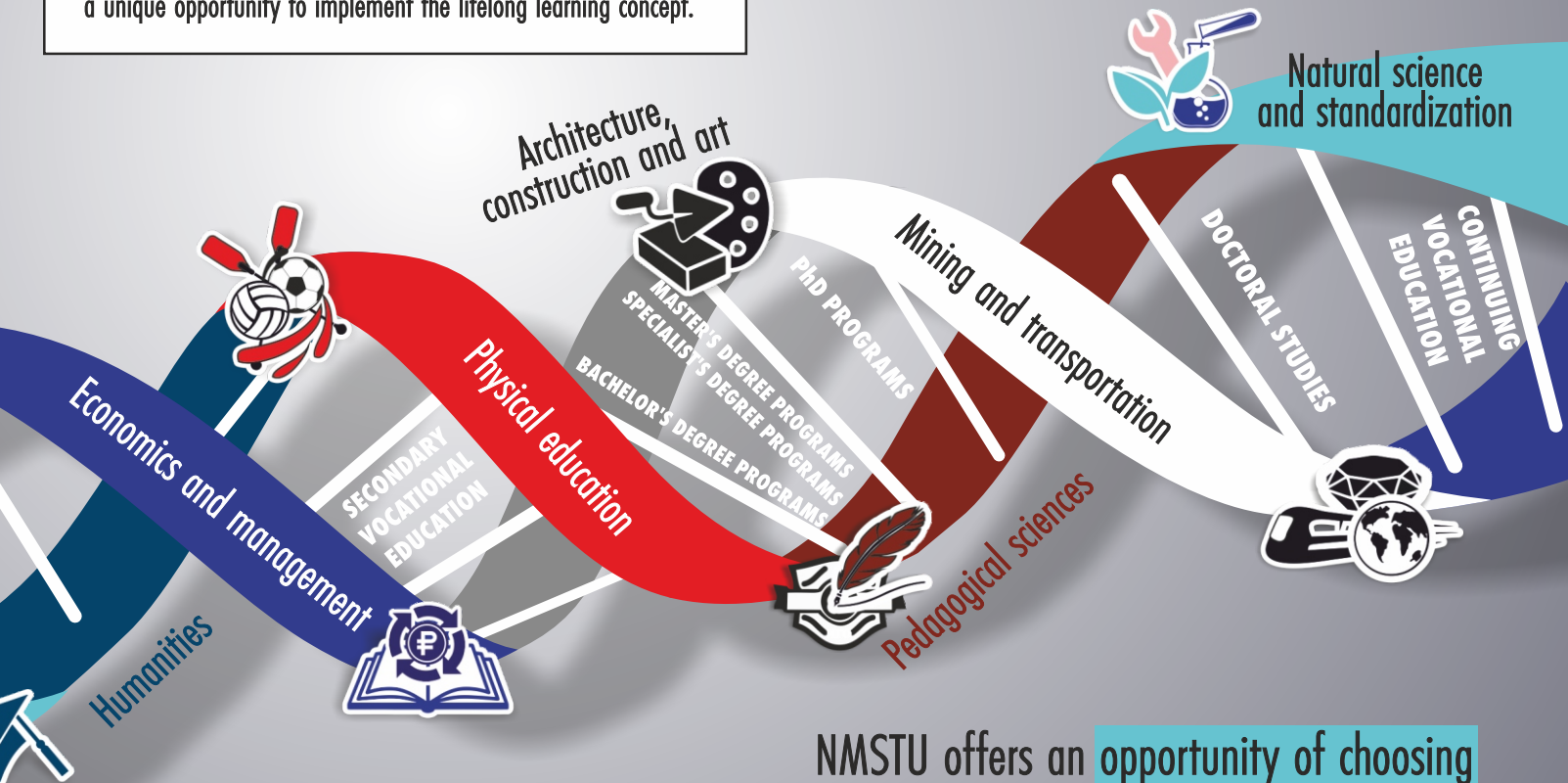
Power engineering, automated systems,
information technologies

PREPARATORY COURSES

PROJECT SCHOOL



The University complies with all current requirements and provides a unique opportunity to implement the lifelong learning concept.



NMSTU offers an opportunity of choosing not only a major, but also a required level

PERSONALIZED LEARNING PATH

**Access to courses of Russian
top universities OPENEDU.RU**



**ELECTRONIC
LIBRARY
SYSTEMS**



Learning

**ACCESS TO SCHEDULES
OF CLASSES AND
EXAMINATIONS**



**COLLABORATION
WITH GROUPMATES,
TEACHERS
AND THE TUTOR**



**ELECTRONIC
GRADE BOOK**

**ACCESS TO
TRAINING
COURSES**

**INDEPENDENT
STUDENT ASSESSMENT**



**STUDENT
PORTFOLIO**



Entrepreneurial university



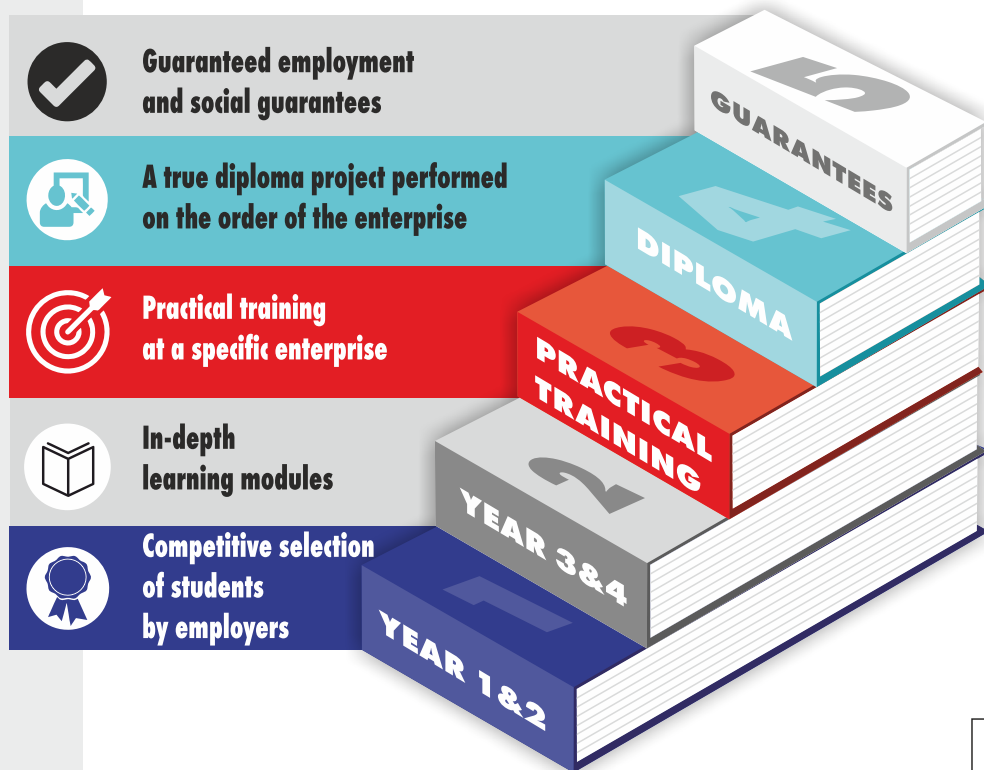
WorldSkills Championship and business project competitions (building entrepreneurial competencies and soft skills)

"Technology entrepreneurship" course (Building fundamentals of technology entrepreneurship)

Jobs at the NMSTU R&D center and small innovative enterprises (building skills to establish a private startup company or a small innovative enterprise)

PERSONALIZED LEARNING PATH MODELS

Bachelor's degree programs 4+
is an in-depth training of graduates together
with enterprises in view of special features of a future field of activities.



INTERNATIONAL ACTIVITIES

According to the rankings of QS, a top world agency, the University is included into TOP 350 of the best universities in BRICS (Brazil, Russia, India, China and South Africa) and in TOP 300 of the best universities in the countries of emerging Europe and Central Asia.



"I gained unrivalled experience of communication in English with people in a foreign country, learnt a lot of interesting about studies of European students, as well as about Serbia, and now I want to come back there", said Alexey Kuskov, a student, about his studies at the University of Kragujevac, Serbia.

**MANY NMSTU STUDENTS
ENJOYED INTERNATIONAL
EXCHANGE PROGRAMS**



"I was happy to study in Milan at Università degli studi di Milano. I believe that I got invaluable experience of communication, broadened my outlook, and increased my level of culture. During my winter vacations I toured not only in Italy, but also in the capitals of the Czech Republic, Sweden, Denmark, Belgium, Germany and Hungary. If I did not participate in the program, it would take several years to visit these countries. At present, our University carries out efficient international activities. Dear students, if you have a chance to participate in the student mobility program, do not think twice about it", said Elizaveta Yakunina, a student.

Particularly in recent years the University is increasingly active in the international field. **Over 60 collaboration** agreements were signed with universities from **28 countries**. The University actively implements **student exchange** programs. This is an opportunity to study in a foreign country (Italy, France, the Czech Republic, Serbia, Germany, China), while being an NMSTU student.

The University participates in all types of EU programs aimed at support of research and educational projects. As part of a consortium of world lead universities, NMSTU implements modern educational programs in engineering, entrepreneurship, logistics and design.



Erasmus+

EXTRACURRICULAR ACTIVITIES

In 2012-2018, students' associations attracted over RUB 70 m to carry out student initiatives

**38 Lenin street
Room 1105A
(South entrance)**

**The Honorary President of the Club is Nikolay Kulemin, a player of the Russian team,
a forward of the Metallurg Magnitogorsk ice hockey club**

Best sports club of Russia in 2018 (according to the Student Basketball Association)

**Bronze winner of the contest "Best student sports club" (according to the Russian
Association of Student Sports Clubs)**



**Uvarovsky
Students' Teams**

6 fields of activities

Over 450 participants

**Seven-time winners of the perpetual trophy "Golden masonry trowel"
and the award of the Best University Students' Team of the Chelyabinsk Region**

**45/1 K. Marx
street
(Building 5,
NMSTU)
Ground floor**

**38 Lenin street
Room 091
(South entrance)**

Member of the Russian Association of Student Media Centers

Modern facilities and photo studio

30 awards in all-Russian media contests



**NMSTU
Student Media Center**

**38 Lenin street
Room 2103A
(South entrance)**

Best volunteer center in the region

Over 2000 volunteers

Participation in 4 world sports events



**Call of the Heart
Volunteer Center**

**38 Lenin street
Room 091
(South entrance)**

**An individual system of leagues of Magnitogorsk
Champions of previous years
Participated in KVN (the Club of the Funny and Inventive People) TV leagues
A total prize fund of the Magnitogorsk KVN league system is
about RUB 400 thousand (per season)**



**KVN
student club**

**NMSTU students' and
PhD students'
primary trade union**



97% of students are trade union members

**Six-time winners of the program
on development of student unions**

Winners of the contest "Student Leader of Russia" in 2014

**38 Lenin street
Room 1101
(South entrance)**

**45/2 K. Marx
street
Rooms 504, 505**

**Winners of the 2nd all-Russian contest of student research
societies and design departments in 2016**

Hosted IKAR, the all-Russian contest of the AeroNet branch

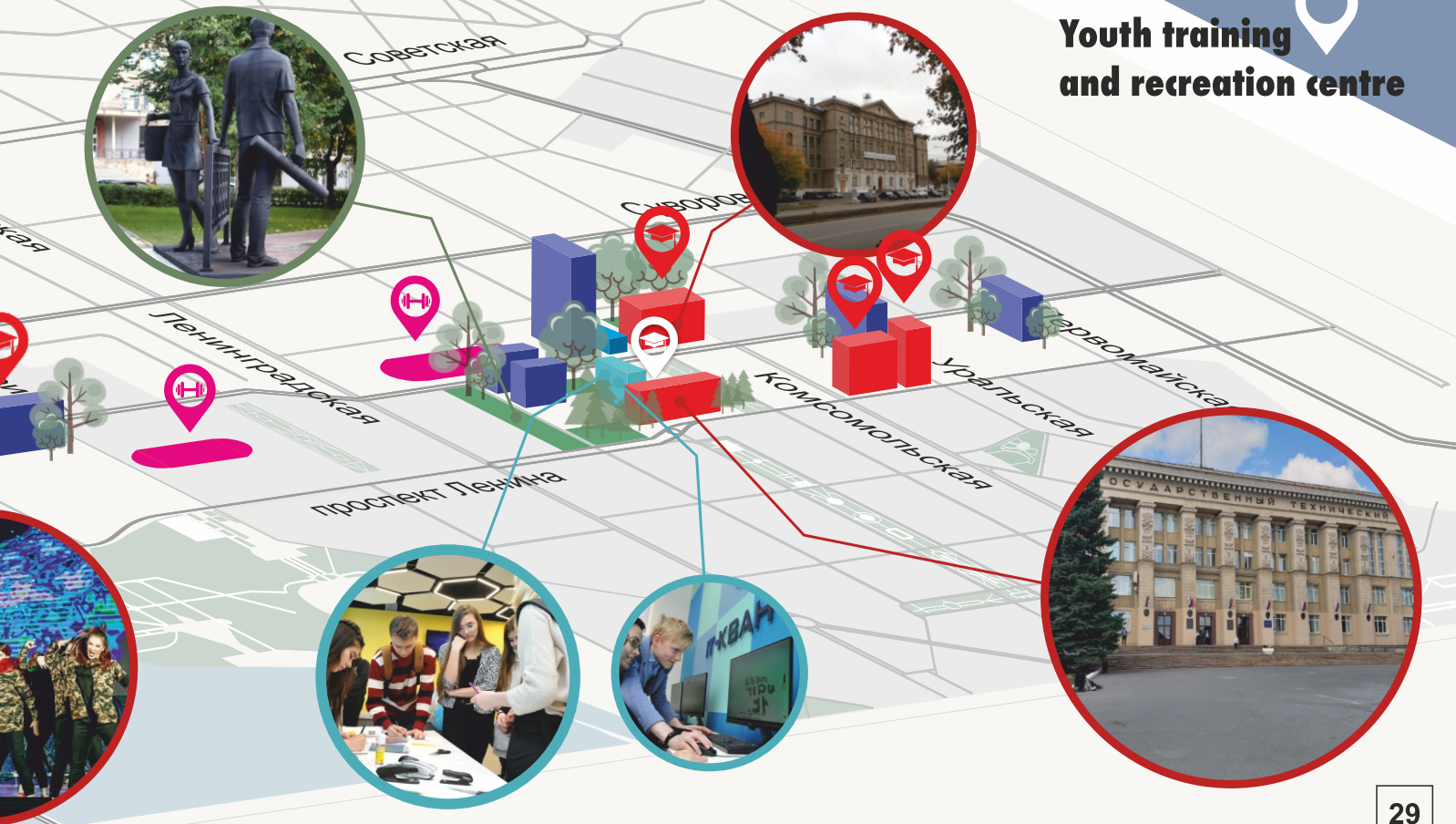


**Student
Research Society**

INFRASTRUCTURE



Youth training and recreation centre





BORIS A. DUBROVSKY

**Ex-governor of the Chelyabinsk Region
Graduated from Magnitogorsk Institute of Mining
and Metallurgy (now, NMSTU) in 1990**

NMSTU graduates work in 44 regions of Russia and abroad. 80% of graduates are employed according to their majors. Annually, NMSTU receives over 1000 applications for graduates from employers. The University alumni include governors, directors of ministries, largest mining and metallurgical, machine-building and chemical works and companies, deputies of the Legislative Assembly and the State Duma of the Russian Federation, laureates of the Russian Federation Government Award.



SERGEY K. NOSOV

**Governor of the Magadan Region
Graduated from Magnitogorsk
Institute of Mining and Metallurgy
(now, NMSTU) in 1983**

Forbes



**VIKTOR
RASHNIKOV**
CHAIRMAN OF THE PJSC MMK BOARD
OF DIRECTORS
GRADUATED FROM MAGNITOGORSK
INSTITUTE OF MINING AND
METALLURGY (NOW, NMSTU) IN 1974

Forbes



**PETR
KONDRASHEV**
PRIVATE INVESTOR
GRADUATED FROM MAGNITOGORSK
INSTITUTE OF MINING AND
METALLURGY (NOW, NMSTU) IN 1972

Forbes



**KONSTANTIN
STRUKOV**
PRESIDENT OF YUZHURALZOLOTO GROUP
OF COMPANIES MANAGING COMPANY
GRADUATED FROM MAGNITOGORSK
INSTITUTE OF MINING AND METALLURGY
(NOW, NMSTU) IN 1980

According to the Forbes assessment of efficiency of Russian universities with regard to a number of rich alumni, TOP 16 includes the only one South Ural university, namely NMSTU: three graduates are included into 100 billionaires of the Forbes list.

Federal State Budgetary Educational Institution of Higher Education

NOSOV MAGNITOGORSK STATE TECHNICAL UNIVERSITY

38 Lenin street, Magnitogorsk 455000 Russia

Rector's office

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23-57-59 (fax)

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[www.vk.com/nmstu](https://vk.com/nmstu) – official group of NMSTU

www.instagram.com/nmstu – official account of NMSTU

www.facebook.com/nmstu – official page of NMSTU

www.youtube.com/user/magtu74 – official channel of NMSTU





nmstu

Magnitogorsk, 2019