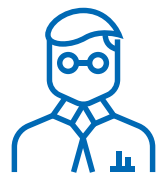




National Research

**Tomsk
State
University**





Student Capital

Tomsk region is a historically developed scientific and innovation center, a region that has significant potential to implement a new technological breakthrough in Russia. Development of the region as

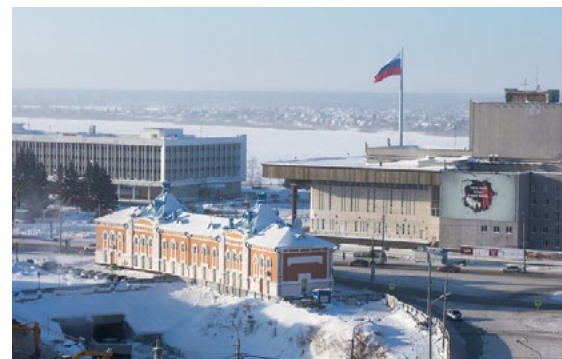
the main Siberian center for research and education began in the 19th century with the foundation of Tomsk Imperial University, the first university east of the Urals.

6 universities

2 private institutions

4 branches of Russian educational institutions of higher education

Tomsk
> 500 thousand people



Innovative Infrastructure

9
business incubators

3
centers for technology transfer

Tomsk Regional Engineering Center

8
offices for commercializing of findings

8
R&D-centers of the major companies

Center for Education, Research and Development
INO Tomsk

67
residents of the special economic zone "Tomsk" in 2017

Tomsk Regional Cluster Development Center



Tomsk is a student and research capital of Siberia

Residents of Tomsk



TOMSK — THE ONLY COLLEGE TOWN OF RUSSIA

543 596 total population,
appr. 164 000 affiliated
with universities

REGION RANKS THE THIRD

(after Moscow and St. Petersburg) by the number
of students per 10 thousand residents



The youth from **70**
Russian regions
and **60** countries
study at six Tomsk
universities



30% of doctoral
and **60%** of Ph.D.
theses in Tomsk
are defended by
young scientists



Over 60 points is
an average score
for the Unified
State Exam at all
Tomsk universities



66% of
graduates
work in
Tomsk region



**25 billion
rubles** is the
cumulative
budget
of Tomsk
research and
academic
unit in 2017



TSU Today

Tomsk State University is one
of the leading universities in Russia



Tomsk State University is a participant of the Project
5-100 since 2013. Following the defence of the Road-
map for 2018–2020 in front of the International Council
(October 2017), TSU became one of the leaders of 5-100.



TSU is in the
world's **top 300**
universities by QS
World Rankings
(277th position)

11th place in QS
Emerging Europe
and Central Asia

26th place in
the QS BRICS
Rankings (4th place
among Russian
universities)



TSU is included in the
501-600 group of the best
universities in the world
according to Times Higher
Education (THE)

Group 251-300, top ten
Russian universities
at THE Europe



Strategic academic units

Strategic Academic Units of TSU are focused on transformations of the society. Each StrAU focuses on one area of research: environment, human, society, and technological environment.

20

faculties and
institutes,
145 departments

38

centers for pre-
university training
and career
guidance in Siberia
and Kazakhstan

24

dissertation councils
(about 20 doctoral
and 100 doctoral
habil. dissertations
are annually
defended at TSU)

3

research
institutes

26

academicians and corresponding members of
the Russian Academy of Sciences (RAS), Russian
Authors Society, and other state academies

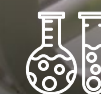
600 doctors habil.
of science
and 1,300 doctors
of science

51

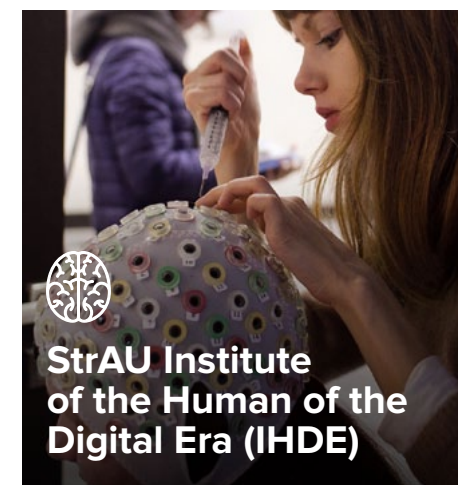
laureates
of the State Prize
of the Russian
Federation

42

leading scientific
schools



**StrAU Institute
of Biomedicine (IB)**



**StrAU Institute
of the Human of the
Digital Era (IHDE)**



**StrAU Institute
of Smart Materials
and Technology
(SMTI)**



**StrAU TSSW:
Siberian Institute
of the Future (SIF)**



Key projects of StrAUs



EXTRA-EARLY DIAGNOSTICS AND THERAPY OF ONCOLOGICAL AND CARDIOVASCULAR DISEASES

STRAU INSTITUTE
OF BIOMEDICINE,
STRAU INSTITUTE
OF SMART MATERIALS
AND TECHNOLOGY



CREATION AND IMPLEMENTATION OF AN INTERDISCIPLINARY AND INTEGRATED ENVIRONMENT FOR THE ANALYSIS OF SOCIAL NETWORKING DATA TO SOLVE THE GLOBAL CHALLENGES OF THE MODERN SOCIETY

STRAU INSTITUTE OF
THE HUMAN OF THE
DIGITAL ERA, STRAU
TSSW: SIBERIAN
INSTITUTE OF THE
FUTURE



TECHNOLOGIES OF FUNCTIONAL NANOELECTRONICS FOR NEW MARKETS AND GLOBAL SCIENTIFIC EXPERIMENTS (ELECTRONICS AND PHOTONICS OF THE FUTURE)

STRAU INSTITUTE OF
SMART MATERIALS
AND TECHNOLOGY,
STRAU INSTITUTE OF
BIOMEDICINE

STRAU IS AN INTERDISCIPLINARY INSTITUTE OF MASTER'S AND POSTGRADUATE PROGRAMS

Characteristics:

1. Integration of research, innovations, and education
2. Interdisciplinary academic programs
3. Comprehensive problematics and transdisciplinary research methods
4. Knowledge transfer to economy



StrAU



TSSW: Siberian Institute of the Future (SIF)

STRAU'S MISSION

Involvement of the world into development of Siberia, determination of the role of Siberia in the global division of labor during transition to the new technological mode.

MAIN RESEARCH PROJECTS

- Project of the international INTERACT network for ground-based research and monitoring in the Arctic.
- Climate impact on carbon emissions and its export by inland waters.
- Investigation of the impact of global processes on the territory and society of Siberia.
- The human in the changing world. Identity and social adaptation: the present and the future.
- Biogeochemical cycles of arctic swamp and lake landscapes of Western Siberia as an indicator of global climate change and the basis for rational nature management of the region.

- Vasyuganskaya, a new observation station of TSU was opened
- Environmental Monitoring Station in Laos was opened

AUTONOMOUS ACADEMIC PROGRAMS



The Study
of Siberia
and the Arctic



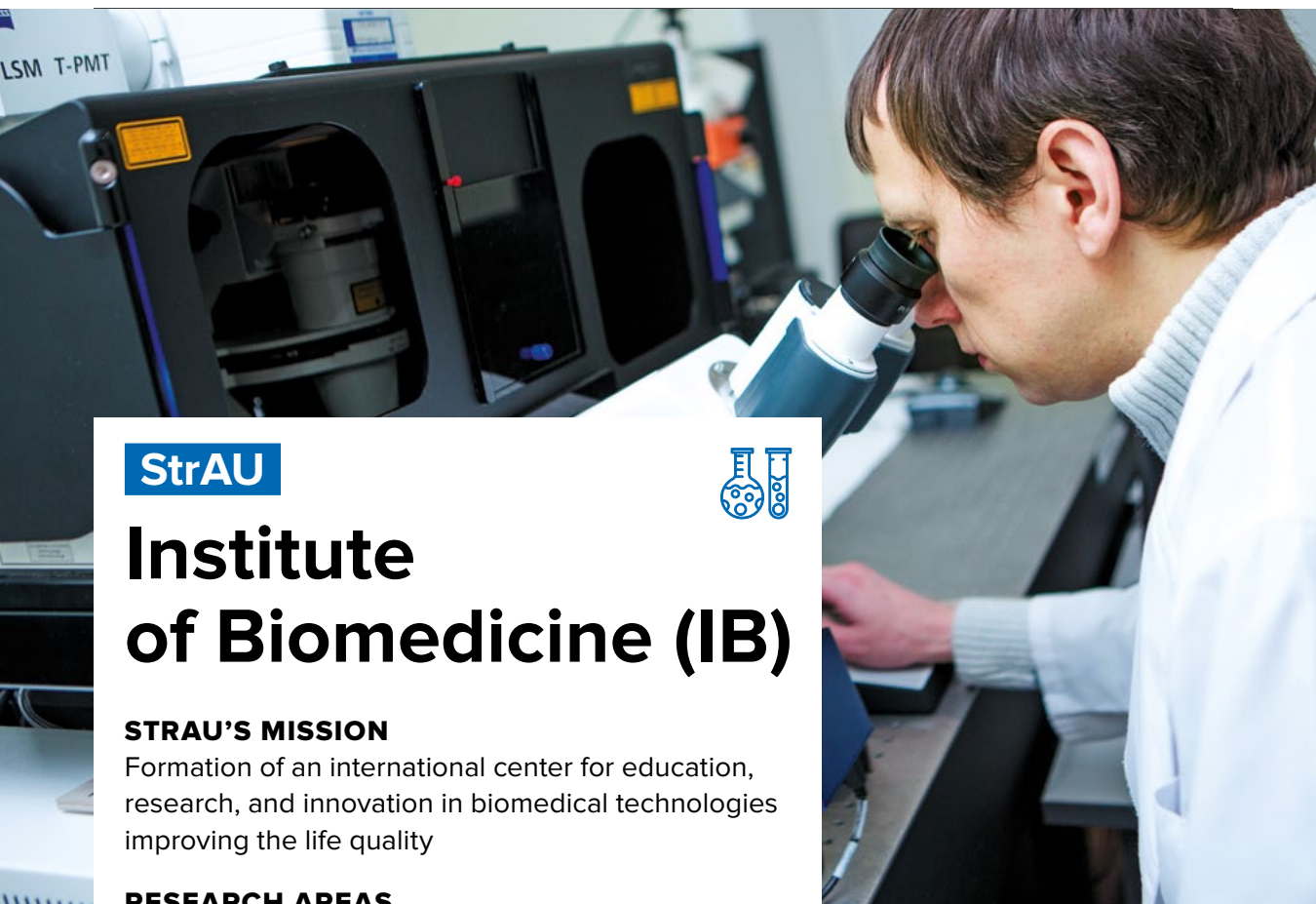
Eurasian
integration



Siberia: resources
and modern
practices of regional
development



Migration
research



StrAU



Institute of Biomedicine (IB)

STRAU'S MISSION

Formation of an international center for education, research, and innovation in biomedical technologies improving the life quality

RESEARCH AREAS

- Translational medicine
- Anti-aging medicine

IMPLEMENTED AND PLANNED ACADEMIC PROGRAMS

- Physics Methods and Informational Technologies in Biomedicine, DD
- Mechanics of BioComposites, Design and Modeling its Structure
- Genetics, Fundamental and Applied Biology, Physiology, Biochemistry, Biotechnology, Bioinformatics of Plants and Microorganisms
- Physics Methods and Informational Technologies in Biomedicine, DD
- Biophotonics
- Mechanics of BioComposites, Design and Modeling its Structure
- Intellectual Analysis of Big Data
- Innovations and Society: Science, Engineering, and Medicine



**Round
University
Ranking**
Medical
Sciences

314th place
in the world

- The first surgery to cover bone tissue defects by the porous nanoceramic implant was made in Russia

- TSU is one of the top 3 universities of Russia in RUR Subject Rankings in Medicine



StrAU



Institute of the Human of the Digital Era (IHDE)

AREAS OF INTEREST

- Research of social and human issues of the society based on Big Data analysis and digital technologies
- Artificial intelligence and methods to maintain decision-making
- Research of factors to develop and teach humans in the digital society; Cognitive Linguistics
- Digital Humanities
- E-learning

INTERDISCIPLINARY MASTER'S PROGRAMS

- Human Development: Genetics, Neural Science, and Psychology
- Humanitarian Informatics
- Digital Technologies in Socio-Humanitarian Practices
- Intellectual Analysis of Big Data
- Computer Linguistics
- Cognitive Linguistics
- Digital Technologies in Publishing



StrAU



Institute of Smart Materials and Technology (SMTI)

RESEARCH AND PRODUCTION AGENDA

- Advanced technologies of industrial sensorics: implementation of smart sensors and controllers into equipment
- Advanced chemical and additive technologies to obtain new materials
- and process renewable raw materials
- Advanced technologies of theoretical and computer forecasting and design of materials and engineering technologies

IMPLEMENTED AND PLANNED ACADEMIC PROGRAMS

- Translational Chemical and Biochemical Technologies
- Fundamental and Applied Chemistry of Substances and Materials
- Innovative Polymers and Management of Chemical Production
- Materials and Devices of Functional Electronics and Photonics

■ Cleansing of the heat exchanger by antirzhavin, which production technology is developed by researchers of the TSU Laboratory of Catalytic Research, entered the list of the best practices of Rosneft. The product is recommended to be used by all oil-refining plants of the company.



University Research

49

scientific and
educational
centers

66

world-class
laboratories with
international
scientific teams

Siberian
Physical-
Technical
Institute

The Scientific
Research
Institute
of Applied
Mathematics
and Mechanics

Research
Library

Siberian
Botanical
Garden



Subject Rankings



QS World
University
Rankings

Physics and Astronomy	TOP 250
Modern Languages	TOP 250
Art and Humanities	289th
Natural Sciences	289th
Chemistry	TOP 500



Times
Higher
Education

Humanities	GROUP 201–250
Natural Sciences	GROUP 201–250
Engineering and Technology	GROUP 251–300



Shanghai
Ranking

Metallurgy	GROUP 101–150
Physics	GROUP 401–500

8 CENTERS OF EXCELLENCE

- The Centre for Research in the Field of Semiconductor Materials and Technologies
- The Centre for Research into Biota, Climate, and Landscape, "BioClimLand"
- The International Centre for Research in Human Development
- The Centre for High Technologies in Medicine
- The Centre for Fundamental and Mathematical Physics
- The Research Centre of New Materials and Technologies
- The Centre of Excellence "Intelligent Technical Systems"
- Development Center of Science, Technology, and Education in Defense and State Security

Leading researchers



Zhores Alferov,
the Nobel
Prize Winner



Terence Callaghan,
the member
of the Royal Swedish
Academy of Sciences

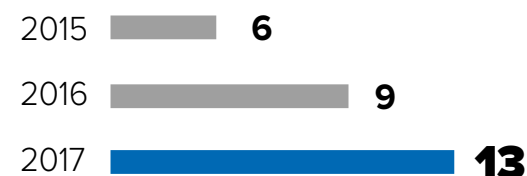


Harald zur Hausen,
the Nobel
Prize Winner

193 international scientists and postdocs

Promotion of TSU journals to WoS and Scopus databases

13 TSU editions are indexed in international databases. TSU held the second place among Russian universities by the number of journals indexed in WoS and Scopus in 2017.





New paradigm to develop innovations

TSU won the competition “Universities as centers of innovation” announced by the Ministry of Education and Science of the Russian Federation. The objective of the project is to develop competitive economy and social sector of the region. It is based on the partnership of universities, business, and authorities.

ACQUIRED IN 2017:

87 patents 4 know-hows 15 license agreements

■ First Russian University Venture Fund was created in 2017

■ 33.3 mln rub Venture Fund

35.6 mln rubles in royalties

REGISTERED AT TSU:

34 programs focused on innovation and business focus

914 intellectual property items

43 small innovative enterprises (SIE)

IN 2017, THREE NEW SIES REGISTERED

- Cifronomika, LLC. The company aims at creation of the commercial center for data storage and processing based on blockchain technologies
- Alrekom, LLC. The company is focused on creation of the general competence database of the university and participation in tender procedures
- Novye obrazovatelnye tekhnologii, LLC. The enterprise works to create and use online platforms for full-time and distance learning of Russian and foreign languages and design of interactive audiovisual technologies to teach any other subjects



Engineering Center of Chemistry and Technology (ECCT) at TSU was in top 3 in 2017 among similar structures, created at the leading Russian universities.

>50

new products and technologies were brought to the market by ECCT within three years

>100

mln rub turnover of ECCT in 2017

85

research and industrial partners and customers

20

issues of chemical and pharmaceutical industry of Russia were solved in 2017

Implementation of the entrepreneurial track

TSU is a member of the Consortium on Development of Student Technological Entrepreneurship



■ The resident center opened at TSU Innovative and Technological Business Incubator. The center is the venue for communication between startups and mentors, where everybody can get an opinion of a potential investor.

2,472

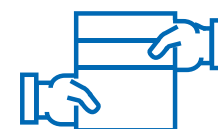
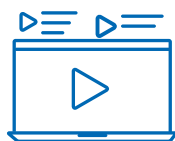
participants **952** of which are TSU students and staff

>5,000

online participants

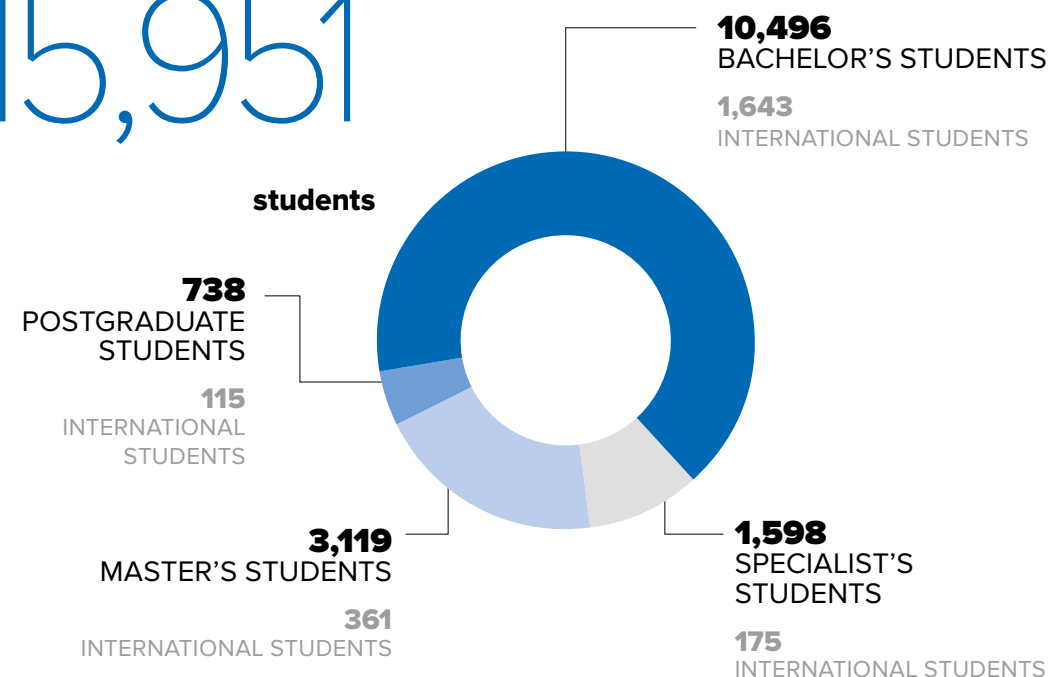
36

events per year



Relevant education

15,951



500

applicants with the Unified State Exam's score over 90

77

winners of Competitions were enrolled at TSU in 2017

23,964

applications for admission to TSU

■ In December 2017, the project Social Navigator by the media group Rossiya Segodnya introduced the Student Employment Rating. TSU is in top 3 of classical universities in Russia.



University as a heart of the city

Ida Bagus Ngurah Parthayana, Indonesia
Institute of Economics and Management

«They provide Russian language preparatory courses, this is important when you are going to study in another country»



I'm second year student at TSU. First 10 months I studied at the Preparatory Department, and now I am first year in Economics. Language of the country where you study is very important. That is why I chose Russia; they provide Russian language preparatory courses. During the first semester it was quite difficult – to listen to the lectures, to make assignments but Russian students were really helpful and supportive of me. In the end I past the first semester and I hope that in the future I will only get excellent grades.

I like the University. When I was choosing a university, I was looking for the best and reading on the Internet a lot about TSU. As a result I decided to study here. By the way, on my way to Tomsk a funny thing happened with me. I got lost at the airport in Moscow. But there I met Konstantin Belyakov (that time I didn't know that he happened to be a vice-rector). He introduced himself simply as TSU employee and helped me to get to Tomsk. Only on TSU campus, I found out who he really was. It was unexpected but fun. It's so great that such helpful people work at TSU. My classmates often ask me how I bear the cold. In fact all the Siberians want to move to a warm country while all the inhabitants of warm countries like snow. I like Siberia however when the temperature was – 40° C; it was quite difficult.

- 116 students are currently enrolled at the Faculty of Pre-University Courses, 47 of which study under the assignment by the Ministry of Education and Science of the Russian Federation. These students are from China, Laos, Vietnam, Mongolia, Ecuador, Spain, Salvador, Brazil, Colombia, Yemen, Bangladesh, Turkey, India, Indonesia, Zambia, Afghanistan, Serbia, Egypt, Cameroon, and other countries.
- 2,294 international students study at TSU (14% of the total number of students)



Freya Louise Kamberlidzh, UK
Faculty of Foreign Languages

«The university is like a heart of Tomsk, it is very beautiful»

I am excited by the Russian literature and Russian language. It is difficult language to learn with all these prepositions, conjugations, endings, and others, but teachers did their best to help us. For example, I have finally started to define verbs of motion with different meanings and even prefixes, and suffixes! During the study I have improved my language skills. I do like excursions around the university, recently we were in the museum of rare books which was really interesting. The people here are very outgoing and ready to answer all questions you may answer, and this university is like a heart of Tomsk, it is very beautiful.



Yiapao Kaiher, Laos
Institute of Economics and Management

«I always wanted to study in Russia because of it's reputation for high quality education»

I always wanted to study in Russia because it has a worldwide reputation for its high quality education. That is why I applied for a scholarship there. I spent a lot of time researching Russian universities in order to choose the best one. Presentation of TSU made by the vice-rector for International Affairs was a turning point for me. He told a lot about Tomsk, the university, and opportunities that will unfold around us if we become the students of TSU. Vice-rector answered all of our questions at length, even about dormitories.

The standard of living in Tomsk is high, but the prices are low. It's also a very beautiful town. I was happy to know that I got accepted into TSU. I am sure that everyone who has ever been to TSU says that they like the grove and the main building and they are very beautiful indeed. They are the symbols of TSU's long history and embodiment of its spirit. Of course it is not easy to study in Russian. Listening to lectures and doing homework in Russian is a challenge, writing Cyrillic is pretty difficult. But I'm positive that a quality knowledge and experience I'm gaining will undoubtedly help me in the future!

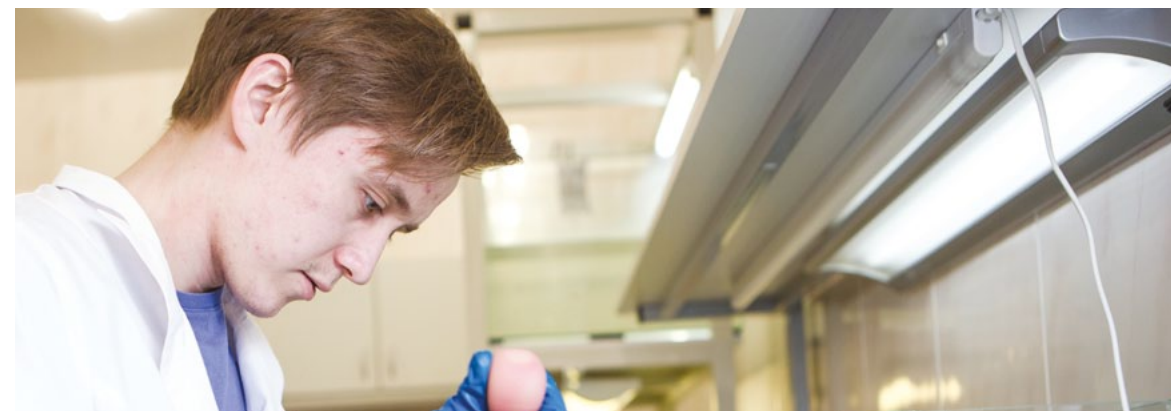


New institutes

Integration of academic structures of TSU continued in 2017. Two Research and Academic Centers opened at TSU: Higher School of Journalism and Institute of Applied Mathematics and Computer Science. Currently, Faculty of Philology and Faculty of Foreign Languages are discussing how to merge under the Research and Academic Center of Modern Languages and Literature.

Program of professional retraining AgriMBA received the international accreditation. The program became the fourth in Russia and the first in the eastern part of Russia in agribusiness with the international status.

- In 2017, the university celebrated the 100th anniversary of physical and mathematical, historical and philological education
- TSU won the prize For Internationalization of Higher Education, nomination Internationalization of Academic Programs
- 24 academic programs entered the list of the Best Academic Programs of the Innovative Russia – 2017
- TSU received the status of the teaching institute by the University of London. TSU became the 5th university in Russia and the one in the eastern part of Russia.
- Students, enrolled at TSU, will be able to study at the Bachelor's program Business and Management at University of London International Programmes



Expanding academic opportunities

10

Double Degree programs

12

exchange programs

TSU received a license to teach the major Legal Support of National Security

54

Master's programs

7

programs taught in English

6

new Master's programs, 4 of which are autonomous interdisciplinary programs at StrAUs

29

student exchange program

324

Russian and international students participated in joint academic programs

20

PhD programs

7

double PhD programs



E-learning and distance learning

Regional Competence Center in Online Learning was created at TSU. The Center serves to develop online learning in higher education and secondary professional education organizations.

MASSIVE OPEN ONLINE COURSES (MOOCS)

16

new MOOCs

45

courses available on Russian and other than Russian online platforms

52%

of MOOC students get familiar with TSU due to MOOC on Coursera

INCREASE IN THE NUMBER OF STUDENTS

>50 000

international citizens (including citizens from the CIS countries)

TSU entered **TOP 30** of partners of international academic platform Coursera by the number of online courses

897

students from over 25 regions of Russia, the CIS countries and non-CIS countries attended 6 seasons of the Annual Siberian MOOC School



Partners of TSU

TSU was the first in Russia to enter the United Nations program in territory development

INTERNATIONAL COOPERATION

- 26th place in QS University Rankings BRICS
- Share of international students of TSU corresponds to the claimed number. It is in top 5 universities of BRICS countries

PRIORITY COUNTRIES

CENTRAL ASIA

Mongolia, China, Kazakhstan, Uzbekistan, Kyrgyzstan, Tajikistan

SOUTH ASIA

India, Pakistan

SOUTHEAST ASIA

Vietnam, Laos, Malaysia, Indonesia, Singapore

EUROPE

Italy, Poland, Czech Republic, Netherlands, France, Great Britain, Spain

KEY AGREEMENTS

- London school of economics (UK), QS 38
- Higher Polytechnic School École Polytechnique (France), QS 59
- IIT Bombay (India), QS 162
- Leiden University (Netherlands), QS 109
- University of Sussex (UK), QS 227
- IIT Madras (India), QS 264

TSU entered the Consortium of exporter universities of the priority project Export of Education by the Ministry of Education and Science of the Russian Federation



International recognition

- Tomsk State University is in top 3 universities with the best English web-sites in the ranking by the Russian International Affairs Council
- The second meeting of rectors of the Russian-Indian Network took place at TSU. The main discussion topic was interaction in terms of developing smart cities and improving the ecosystem and life quality of humans
- In Hanoi (Vietnam), TSU held 2nd International forum "Russian Education in the Eurasian Context". The objective of the forum is to demonstrate potential of Russian education, discuss methods of teaching Russian as a Foreign Language, and present projects to promote Russian language and culture

INTERNATIONAL SUMMER AND WINTER SCHOOLS

9

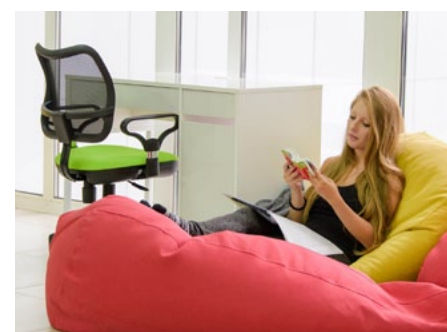
schools annually

120

students from 21 countries



Smart, energy-efficient, and safe campus



12

academic buildings

Research Library

6

residential halls

Sports grounds and gyms, swimming pool, 2 recreation camps

2

kindergartens

Siberian Botanical Garden

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Data as
of December 2017

