

MINISTRY OF SCIENCE AND HIGHER EDUCATION OF THE RUSSIAN FEDERATION

FEDERAL STATE BUDGETARY EDUCATIONAL INSTITUTION OF HIGHER EDUCATION

TAMBOV STATE TECHNICAL UNIVERSITY



2024

Infrastructure



Campus

- 16 university buildings
- 4 hostels
- 2 summer camps
- Sport complex «Bodrost»



Educational structure

- 8 institutes
- 2 faculties (inc. Department of training and certification of highly qualified staff)
- college (Multidisciplinary)
- Polytechnic school



Laboratory facilities

- more than 240 classrooms
- 150 research laboratories
- TV studio and a newspaper «Alma-Mater»



Education

Educational structure



- Technological Institute
- Institute of Power Engineering, Tool engineering and Radio Electronics
- Institute of Automation and Information Technologies
- Institute of Architecture, Civil Engineering and Transport
- Institute of Economics and Quality of Life
- Institute of Law
- Institute of Study by Correspondence
- Institute of Additional Professional Training



- Faculty of Natural and Social Sciences
- Faculty of International Education
- Department of Training and Certification of Highly Qualified Staff

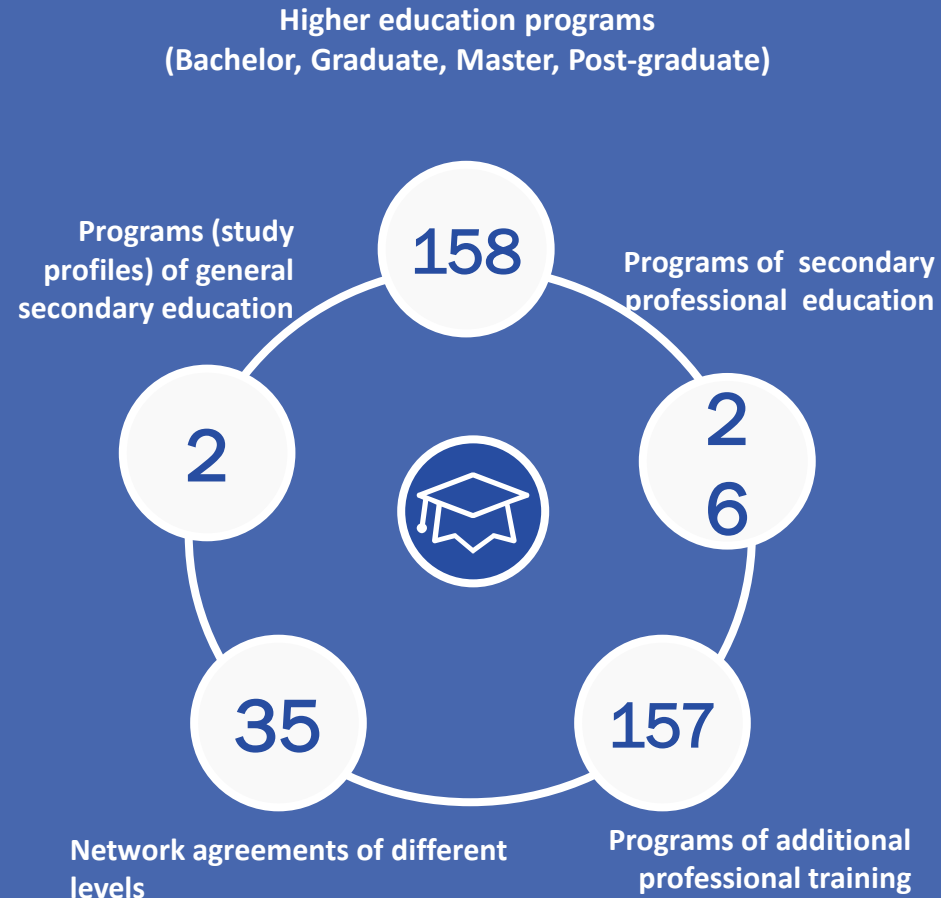


- Multidisciplinary college



- Polytechnic School

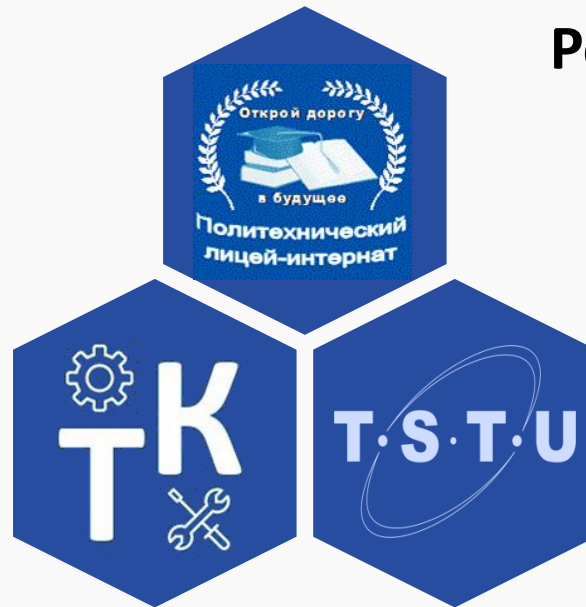
Educational Programs



Pre-university training

Multidisciplinary College of TSTU

- Construction and Operation of Buildings and Structures
- Information Systems and Programming
- Information Security of Automated Systems
- Radio Equipment Manufacturing
- Development of Electronic Devices and Systems
- Environmental Safety of Natural Complexes
- Economics and Accounting
- Commerce
- Banking Activities
- Social Security Law and Organization
- Law-Enforcement Activity



Polytechnic Lyceum of TSTU

Specialized Secondary General Education (grades 10-11)
Engineering and Technical Specialization
Technical and Economic Specialization

Interrelated Main Programs Additional Education Programs



Scientific management of educational organizations and organizations of additional education for children, pre-specialized training, specialized university classes, technological training for schoolchildren

Institute of Automation and Information Technologies



Structure:

- 4 departments
- 4 research and educational centers
- Center of shared access "Robotics"
- Regional educational and scientific center for Information security problems

Bachelor programs

- Information Systems and Technologies
- Informatics and Computer Engineering
- System Analysis and Control
- Mechatronics and Robotics
- Quality Management
- Engineering Systems Control

Master programs

- Information Systems and Technologies
- Informatics and Computer Engineering
- System Analysis and Control
- Mechatronics and Robotics
- Quality Management
- Engineering Systems Control

Post-graduate programs

- Information Systems and Technologies
- Information security
- Engineering Systems Control

Councils for the defence of PhD theses

- Д 212.260.01
05.11.13 - Devices and Methods for Monitoring the Natural Environment, Substances, Materials and Products
- 05.13.06 - Automation and Control of Technological Processes and Production (Industry)
- Д 212.260.05
05.11.16 - Information-Measuring and Control systems
- 05.25.05 - Information Systems and Processes
- Д 212.260.07
05.13.01 - System Analysis, Management and Information Processing (Information Technology)
- 05.13.18 - Mathematical Modeling, Numerical Methods and Program Complexes

Graduate program

- Information security of Automated Systems

Additional Professional Education Programs

Institute of Architecture, Civil Engineering and Transport



Structure:

- 7 departments
- 7 Scientific and Educational Laboratories
- 2 Educational and Scientific Complexes
- Center of Shared Access "BIM Technologies"
- Art-graphic Studio "Capital"

Bachelor programs

- Architecture
- Construction
- Technology of Transport Processes
- Operation of Transport and Processing Machinery and Complexes
- Agricultural Engineering
- Service
- Design
- Urban planning

Master programs

- Architecture
- Construction
- Technology of Transport Processes
- Operation of Transport and Processing Machinery and Complexes
- Agricultural Engineering
- Environmental Design
- Urban Planning

Post-graduate programs

- Mathematics and Mechanics
- Construction Techniques and Technologies
- Technologies and Facilities for Mechanization of Agriculture, Forestry and Fisheries

Councils for the defence of PhD theses

- Д 999.179.03
05.20.01 Technologies and Facilities for Mechanization of Agriculture (in Technical Sciences)
- 05.20.02** Electrotechnology and Electrical Equipment in Agriculture (in Technical Sciences)
- 05.20.03** Technologies and Maintenance Equipment in Agriculture (in Technical Sciences)

Graduate programs

- Construction, Maintenance, Reconstruction and Covering of Highways, Bridges and Tunnels

Additional Professional Education Programs

Institute of Power Engineering, Tool Engineering and Radio Electronics

Structure:

- 5 departments; 5 scientific and research centers
- 3 scientific and research laboratories
- Telemedicine Center, Center of Shared Access «Radio Electronics and communication»
- Radio station



Bachelor programs

- Radio Engineering
- Information and Communication Technologies and Systems
- Design and Technology of Electronic Means
- Biotechnical Systems and Technologies
- Heat Power Engineering and Heat Technology
- Electric Power Engineering and Electrical Technology

Master programs

- Radio Engineering
- Design and Technology of electronic Means
- Biotechnical Systems and Technologies
- Heat Power Engineering and Heat Technology
- Electric Power Engineering and Electrical Technology

Post-graduate programs

- Electronics, Radio Electronics and Communication Systems
- Photonics, Instrumentation, Optical Systems and Technologies
- Electrical Engineering and Heat Engineering

Councils for the defense of PhD theses

- Д 212.260.01
- 05.11.13 - Devices and methods for monitoring the natural environment, substances, materials and products
- 05.13.06 - Automation and control of technological processes and production (industry)
- Д 212.260.05
- 05.11.16 - Information-measuring and control systems
- 05.25.05 - Information systems and processes
- Д 999.179.03
- 05.20.01 Technologies and means of agricultural mechanization
- 05.20.02 Electrotechnology and electrical equipment in agriculture (technical sciences)
- 05.20.03 Technologies and means of maintenance in agriculture (technical sciences)

Graduate program

- Special Radio Engineering Systems

Additional Professional Education Programs

Technological Institute



Structure :

- 9 departments; 5 Scientific and Educational Centers
- 3 Scientific and Research Laboratories
- Center of shared access «Obtaining and application of multifunctional nanomaterials»
- Center of shared access «Digital engineering»,
- Center for prototyping and industrial design
- Engineering center

Bachelor programs

- Earth sciences
- Mechanical Engineering
- Chemical Technology
- Industrial Ecology and Biotechnology
- Technosphere Safety and Nature Management
- Applied Geology, Mining, Oil and Gas engineering and Geodesy
- Materials Technology
- Nanotechnology and Nanomaterials
- Light Industry Technologies

Master programs

- Earth sciences
- Mechanical Engineering
- Chemical Technology
- Industrial Ecology and Biotechnology
- Technosphere Safety and Nature Management
- Applied Geology, Mining, Oil and Gas engineering and Geodesy
- Materials Technology
- Nanotechnology and Nanomaterials
- Light Industry Technologies

Post-graduate programs

- Earth Sciences
- Mechanical Engineering
- Chemical Technology
- Industrial Ecology and Biotechnology
- Nanotechnology and Nanomaterials

Councils for the defence of PhD theses

- Д 212.260.02
- 05.02.13 – Machines, Devices and Processes**
- 05.17.08 – Processes and Devices of Chemical Engineering**
- Д 212.260.06
- 05.17.03 – Technology of Electrochemical Processes and Corrosion Protection**
- Д 212.260.07
- 05.13.01 – System Analysis, Information Processing and Control (IT)**
- 05.13.18 – Mathematical Modeling, Numerical Methods and Program Complex**
- Д 999.080.03
- 02.00.21 – Solid State Chemistry (Chemical Science);**
- 05.16.08 – Nanotechnology and Nanomaterials**
- (Chemistry and Chemical Technology) (Tech/ Sciences**

Graduate program

- Design of Technological Machines and Complexes

Additional Professional Education Programs

Institute of Economics and Quality of Life



Structure:

- 4 departments
- Research and Marketing Center
- SEC«Digital Economy»
- Interregional Research Laboratory «Contemporary Technologies in Education and Business»

Bachelor programs

- Economics
- Management
- Business Informatics
- Trade
- Housing and Communal Infrastructure

Master program

- Economics
- Management
- Business Informatics
- Trade
- Finance and Credit
- Housing and Communal Infrastructure

Post-graduate programs

- Economics
- Education and Pedagogical Sciences

Graduate program

- Economic security

Additional Professional Education Programs

Institute of Law



Structure:

- 7 departments
- Legal clinic “Student right desk”

Bachelor programs

- Applied Computer Science
- Law
- Advertising and Public Relations

Master programs

- Information Systems and Technologies
- Applied Computer Science
- Law
- Advertising and Public Relations

Post-graduate programs

- Law
- Political Science and Regional Studies
- Historical Sciences and Archaeology

Council for the defense of PhD theses

- Д 999.169.03
07.00.02 Native history
07.00.03 General History (Modern and Contemporary History)

Graduate program

- Legal Support of National Security

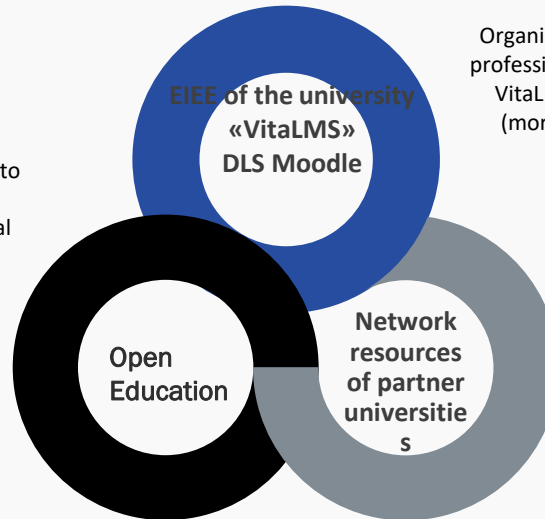
Additional Professional Education Programs

Open Education

Opportunity to master educational programs (basic, additional) according to an individual plan and using elements of distance educational technologies from the EIEE of the university

Attain support of educational programs components learning for students in the format of a MOOC on open education platforms

Online courses (modules) for each educational program



Organization of self study on the main professional educational program in the VitaLMS environment, DLS Moodle (more than 1000 author's training courses)
Formation of extra competencies for additional professional education programs

Mastering part - time educational programs (main professional educational programs for bachelor's, specialist's, master's degree)

Organization of online consultations in Mirapolis environment

Infrastructure

- Department of Educational Programs, Department of Information Management
- Study by correspondence Institute
- Institute of Additional Professional Education

Cooperation with gifted children and youth Olympiads and Contests

 <p>Multidisciplinary Engineering Olympiad</p>	<p>Olympiad "Kurchatov"</p>		<p>«Engineering Olympiad for Schoolchildren of Central Russia»</p>	 <p>СТУДЕНЧЕСКАЯ ОЛИМПИАДА Я – ПРОФЕССИОНАЛ ПРОФИ</p>	<p>CHAMPIONSHIP WorldSkills</p>	
<p>Multidisciplinary Engineering Olympiad «STAR»</p>		<p>All-Russian Olympiad for schoolchildren</p>		<p>Olympiad in Mathematics and Cryptography</p>		<p>TSTU Interregional Olympiad for schoolchildren "Creativity as the Basis for the Regional Economy Development "</p>

Science and Innovation



Capacity

- 108** Doctors of Science
- 14** scientific schools
- 154** post graduate students
- 5** doctoral students
- 9** dissertation councils
- 9** specialized integrated research and educational centers
- 14** spin-offs
- 4** specialized innovation centers
- 4** scientific journals



Scientific and educational centers

- 9 research centers with Russian Academy of Sciences Institutes



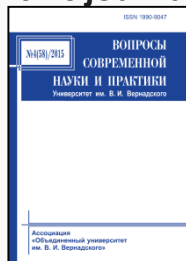
Research laboratories

- Intelligent information-measuring and control systems design
- Modeling and design of complex technical systems
- Functional nanomaterials and life support systems
- Automated quality control systems for substances, materials and products
- Chemistry and technology of organic substances and fuels
- Mechanics of composite materials and structures
- Intelligent energy saving control systems
- Alternative energy sources
- Nanocarbon materials
- Solid state technology



Centers

- **Engineering Center** "New materials and technologies for civil and dual use"
- **Center of Shared Access** for Radio Electronics and Communications
- **Center of Shared Access** "Digital Engineering"
- **Center of Shared Access** "BIM - technologies"
- **Center of Shared Access** "Obtaining and application of multifunctional nanomaterials"
- **Innovation and Technology Center** "Polymer composite materials"
- **Student Design Office**
- **Business - incubator** "Innovatika"
- **Center of Shared Access** "Robotics"



Scientific Directions

Chemistry, functional and structural materials, nanotechnology

Control of nonlinear oscillations of adaptive thin-walled composite structures
Development of human respiratory protection systems from damaging factors of a chemical and biological nature
Investigation of the nitrogen adsorption kinetics and the cyclic process development of air enrichment with oxygen

Development of a new generation of multi-purpose graphene-based lubricants
Development of mobile adaptive training complexes
Development of technology and equipment for the carbon nanotubes production

Energy and resource saving, Electronic Design and Radio Engineering

Methodology development for intelligent systems construction of multidimensional technological object energy-saving control on a set of operating states.

Fundamental studies of the mechanical activation of hydrocarbon motor fuels.

Development of energy-saving technology for the electrical insulators production from polymeric and nanocomposite materials.



Environmental management and protection

Systems based on graphene nanostructures for the complex removal of highly toxic waste in the process of purification of man-made water environments.

Approach development in the study of electrochemical membrane processes of extraction with the component from industrial solutions and effluent.

Kinetics of wastewater treatment processes using microalgae.

Communicative aspects of historical, legal and socio-economic development of society

Information Systems and Information Security

Construction of information support models and algorithms of vision systems for plant agricultural product quality control .

Development of a decision support system for doctors with an individualized assessment of the preoperative state.

Models and methods of IR-visibility of subsurface objects for prevention of accidents in the city life support systems using unmanned aerial vehicles.

Economics and management, quality of life.

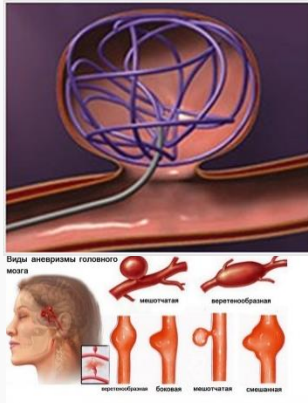
The history of mortgage lending for agriculture in the Tambov province in 1884-1917.

Figures of “democratic socialism” in the context of the political culture of Russian society in the first quarter of the 20th century.

The peasantry in conditions of modernization and destruction of traditional values: social deviations of the late XIX - early XX century. (regional aspect)

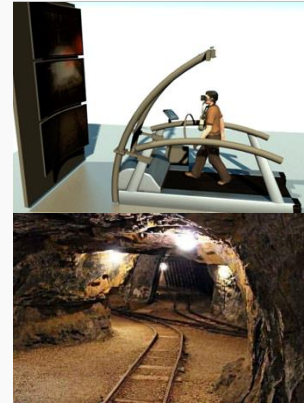
Professional education

Current Research Projects



Grant of the Russian Scientific Fund

Development of a comprehensive method for diagnosis and assessment of cerebral aneurysms genesis in installation of flow-guiding stents using endoscopic optical coherence tomography and individualized high-precision mathematical modeling of cerebral hemodynamics.



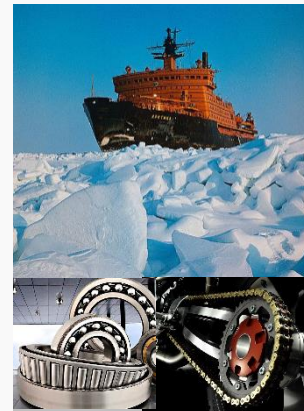
Task of the Ministry of Science and Higher Education of the RF (project)

Development a mobile adaptive computer simulators for ergatic systems for professional use, implementing methods of augmented reality, prevention and liquidation of emergency situations



Resolution of the RF Government

Development of technology and complex equipment to generate electricity from byproducts resulting from disposal and recycling of poultry farms, food industry, timber and woodworking industry



Federal Target Program

Development of a new generation of multi-purpose greases for use in the Arctic and the Far North conditions using graphene-based anti-wear additives



Federal Target Program

Construction of models and algorithms of vision systems information support for quality control of vegetative agricultural products.

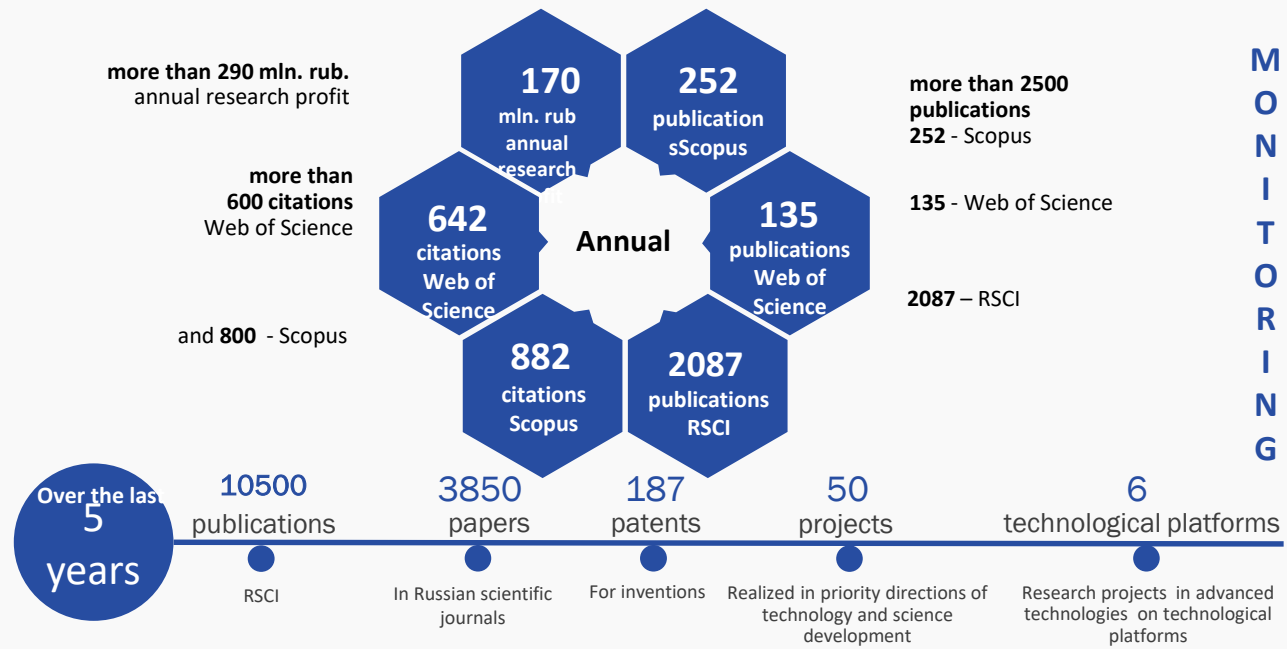


The RF State Program "Development of industry and its competitiveness" (of the Ministry of Science and Higher Education)

Engineering Centre

New materials and technologies of civil and dual use

Research Results



RANKING

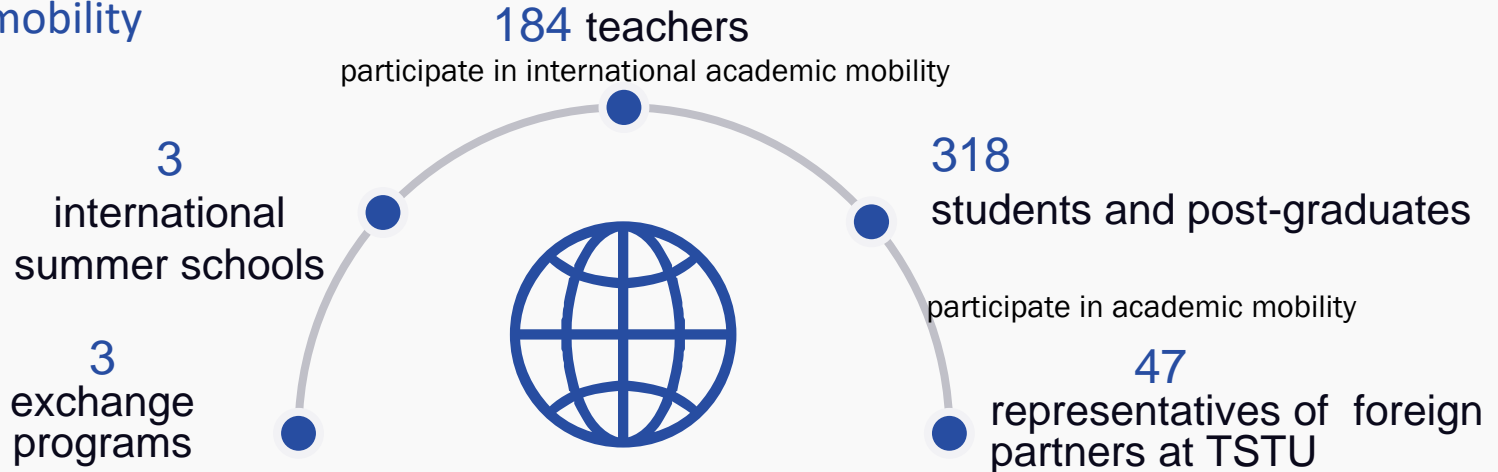


International Activities

Educational and Scientific Cooperation



Academic mobility



(delivering lectures, participation in international conferences and forums at TSTU)



Bologna Process

- European diploma supplements – 78;
- 2 programs of additional education in English are being implemented - "International Specialist in Production Management", "International Specialist in Law“;
- 2 programs of «double diploma» – “Agricultural Engineering” and “Design, Construction and Maintenance of Energy Efficient Buildings”



International Projects ERASMUS + and TEMPUS

- Project ERASMUS + “Master Degree in Innovative Technologies in Energy Efficient Buildings for Russian and Armenian Universities and Stakeholders” (MARUEEB) <http://marueeb.ru/>
- Project ERASMUS + Engineering Educators Pedagogical Training (ENTER) <http://www.erasmus-enter.org/>
- Project NEPTUNE “Project-oriented training for students of architectural and construction profiles”



Program of the Ministry of Science and Higher Education of the RF Scholarships of the RF President for study abroad

- 23 students and post-graduates obtained financing for study and scientific research at the universities of China, Serbia, Czech Republic, Spain, Italy, Portugal, Slovakia, Malaysia in 2017-2024. Total amount of financing exceeds 22 million rubles.

Student Life

Student self-management



Creativity



Social and volunteer projects



Healthy lifestyle



Current Youth Projects



Project of involving first-year students in active youth environment
"I am a student of Russia!"



Festival of modern ethnic fashion
«Tambov Region»



Engineers of the Future

Regional Forum "Volunteer of the Central Federal District"

Federal State Financed Educational
Institution of Higher Education

TAMBOV STATE TECHNICAL UNIVERSITY

Contacts

Tel.: +7 (4752) 63-10-19

Rector
Doctor of Technical Sciences,
Professor of the RAS
Mikhail N. Krasnyanskiy

Address

106/5, bld.2, Sovetskaya Str.,
Tambov, 392000, Russia

Social media

vk.com/tmbstu
ok.ru/tmbstu
press.tstu.ru

Web-site and Email

www.tstu.ru
rector.tstu.ru
tstu@admin.tstu.ru

