

# **UNIVERSITY OF TECHNOLOGY**



## Dear (Hends)

Our University eelebrated the 20th original anniversary in 2018.

Our Unixa real quick for the history but for us to a lifetime full of axivity, hopes and oreation. In a short span of time the University of Technology has grown into a thriving centre for education and research in the Moscow region. For the second year in a row our University is included in the TOP-100 best universities of Russia according to CENTLA rendering.

In my opinion our success is really great. But, as the saying runs, it is impossible to stop progress. Our world is constantly changing and three is no room for leisure or stop over and in order to comply with the spirit of the time, we should pool both human and material resources. The University continued prosperity can be reached only by joint eventivity of academics, students and administrative starffeed and I am sure that only together we will succeed in implementing a lot of ambitious projects.

Let me thank all the friends of our University, assisted in its formation and development, the teaching staff and of course our talented students and alumni for the high results achieved!

We sincerely hope to see at our University all those who understand that the successful career depends on to a great extent on the appropriate educational establishment choice and of course our doors are open for the foreign partners, interested in the cooperation in educational and research sphere!



Tatyana Startseva Rector of University of Technology Ed.D., professor



## About us

The University of Technology is a young, being on the rise, university. It is located in the Moscow region, the city of Korolev - a cradle of the Russian astronautics and the largest science city in Russia. The university has been successfully performing educational and research activities since 1998 and is guided by the latest achievements in these spheres.

In a very short space of time the University of Technology has achieved considerable success, having risen through the ranks of the non-state educational institution to the state university. The established educational, research, international and extracurricular activities allowed the University of Technology to be included in the TOP-100 best higher education institutions of Russia in 2018 and 2019 (RAEX ranking).

The University of Technology is one of the largest state universities of the Moscow region. The university campus consists of 6 academic buildings and 2 dormitories – all within walking distance from each other. There are 4 institutes, 2 colleges and Children's Techno- Park "Quantorium" at the University of Technology. The higher education institution has 26 departments and 14 of them are established at the leading enterprises of the region and aimed at the students' practice-oriented training. The university offers 50 majors for bachelor, master and postgraduate degrees. The university library owns more than 1,300,000 pieces of print and electronic editions on any themes. Vast auditoriums, equipped with the necessary facilities, contribute to the development of the students' creative skills.

More than 6,000 students are enrolled at the University of Technology, including about 600 foreign students from 11 countries. The teaching staff totals 350 members, 80% of them have academic degrees and ranks.

In 2015 on the basis of the University of Technology the Regional Science and Education Cluster «North-East» was set up. The cluster, located in the north-eastern part of the Moscow region, has formed a unified science and education space for covering the needs of the high technology enterprises with the qualified professionals.

The university is also a member of three clusters: the Federal Interregional Cluster «Composites without borders», established on the territories of the Moscow region, the Republic of Tatarstan and the Saratov region; the Moscow region Electrical Engineering Cluster "Electrical Engineering XXI" and Innovation Territorial Cluster of Nuclear-Physical and Nano-Technologies (Dubna).

Within close collaboration with the enterprises of real economy, the Engineering Center "High - Temperature Composites" with modern laboratories, equipped with the latest higher-precision facilities, was set up in partnership with JSC "Kompozit" at the University of Technology. In the Center the students, postgraduates and JSC "Kompozit" leading specialists research and develop new hi-tech materials for their further use in rocket science.

The small innovation enterprises, the Department of Youth Science Development, the Student Scientific Society and the Student Design Office have been established at the University.

Every year the University of Technology becomes a platform for various scientific events, including international and regional scientific and practical conferences.

There are 3 academic periodicals at the University of Technology. 2 of them are included in the list of scientific issues, approved by the State Commission for Academic Degrees.

The University of Technology is actively involved in social and economic development of the Moscow region. The students of the higher education institution are regular participants of various ecological forums, volunteer movement, sports and cultural events both of the city and the region.

The internationalization of education is an integral part of the University of Technology

international activity. At present, more than 45 international agreements are signed with foreign universities around the world. The University of Technology is an active participant in ERASMUS+ mobility program.

Academic mobility is also implemented within the bilateral agreements with foreign universities.

The University of Technology is registered in the ANABIN database, an international system of higher education institutions' recognition, having "H+" status. This status allows the university graduates to nostrify their diplomas in EU and apply for the European research and educational grants.

Based on the annual higher education institutions' annual monitoring, held by the Ministry of Science and Higher Education of the Russian Federation, the University of Technology was recognized as an effective higher education institution by all indicators.

The University of Technology immediate plans are aimed at the technical majors expansion, the deepening of scientific cooperation with the space industry enterprises and the collaboration broadening with foreign partners in educational and research sphere.



University of Technology -

Future starts here!

University of Technology is included in the TOP-100 best higher education institutions of Russia for the second year in a row (RAEX Ranking)





## **Number of students**



6000





More than 60 fields of education and specialties

80% of academic staff have academic degrees and ranks





26 departments, including 14 specialized departments

6 academic buildings and 2 dormitories



Library - 1,300,000 pieces of print and electronic editions on any themes

## **UNIVERSITY OF TECHNOLOGY**

## **HIGHER EDUCATION**

**Institute for** 

Engineering and Digital Technologies

Faculty for Information and Communication

Systems and Technologies

Faculty for Rocket Space Technology

and Machine Engineering

Institute for Project Management and **Engineering Business** 

> Institute for International Education

Postgraduate Study — Engineering Center -

Institute for Supplementary Education

Space Engineering and Technology College

SECONDARY VOCATIONAL

**EDUCATION** 

**Technology and Design** College

## SUPPLEMENTARY **EDUCATION**

Children's Techno park «Quantorium»









## **Institute for Engineering and Digital Technologies**

## **Faculty for Information and** Communication Systems and Technologies

## **Faculty for Rocket** Space Technology and Machine Engineering

#### **Bachelor Degree**

- ♦ Applied Mathematics and Computer Science
- Profile: Programming Software Development, Mathematical Simulation
- ♦ Information Systems and Technologies Profile: Information Technologies in Engineering Systems
- **◆ Applied Computer Science** Profile: Applied Informatics in Management Systems
- **◆ Information Security** Profile: Information Securing and Protection Technology; Information Analysis Systems for Financial Monitoring
- ♦ Control in Technological Systems Profiles: Control and Information Technologies in Space Information Technologies for Rocket Measuring Equipment

- | ◆ Design-Engineering Support of the **Machinery Production** Profile: Engineering and Technology
- ♦ Mechatronics and Robotics Profile: Mobile Robotics Systems
- **♦ Quality Management** Profile: Quality Management in Engineering
- **♦ Innovation Studies** Profile: Innovation Management in Industry

## **Specialist Degree**

- **♦ Radioelectronic Systems and Complexes** Specialization: RadioElectronic Systems in Space Complexes and Radio Electronic Competition
- Design, Production and Operations for Space Engineering Specialization: Rocket and Space Products Manufacturing and Technological Processing

## **Master Degree**

- Applied Informatics
- Information Security

**Ouality Management** 

















## Institute for Project Management and Engineering Business

#### **Bachelor Degree**

♦ Management Profile: Logistics

♦ State and Municipal Management Profile: State and Municipal Service

**♦** Sociology

Profile: Social Structure, Social Institutions and Processes

Psychology

Profile: Counseling Psychology

**♦ Social Work** Profile: Social Service

**♦ Advertisement and Public Relations** 

Profile: Public Relations and Communicative Technologies

**♦** Service

Profile: Industrial Service

## **Specialist Degree**

**♦ Economic Security** Specialization: Economic and Legal Support for Economic Security

**+** Customs

Specialization: Logistics and Customs

#### **Master Degree**

- Management
- Design
- Psychology

## **♦** Economics

Profiles: Accounting, Analysis and Audit Banking

Enterprise and Business Economics

Finance and Credits **♦** Business Informatics

Profile: E-Business **♦ Trading Business** 

Profile: Business Activities

**♦** Design

Profiles: Fashion

Environment Design Graphic Design

Sociology

Logistics

**Hi-Tech Industries Organization and Management** 











## Institute for International Education

#### Bachelor Degree for foreign citizens (full-time studies)

- **♦ Information Systems and Technologies** Profile: Information Technologies in Engineering
- Applied Computer Science Profile: Applied Computer Science in Management
- **♦** Quality Management
- Profiles: Quality Management in Mechanical Engineering
- **♦** Innovation Economics
- Profiles: Enterprise and Business Economics Finance and Credit Accounting
- Management
- ▲ Profile: Logistics
- State and Municipal Management Profile: State and Municipal Service

- **♦** Commerce
- Profile: Business Activities
- Business Informatics Profile: F-Business
- Service Profile: Industrial Service
- **♦** Sociology Profile: Social Structure, Social Institutions and Processes
- Social Work Profile: Social Service
- Advertisement and Public Relations
   Profile: Public Relations and Communicative Technologies
- **♦** Psychology Profile: Counseling Psychology
- Design
   Profiles: Fashion
  - **Environmental Design** Graphic Design

#### Bachelor Degree for foreign citizens (extramural studies) **♦** Management

- **♦ Quality Management** 
  - Profile: Quality Management in Mechanical Engineering
- **♦** Economics Profiles: Finance and Credit
  - **Enterprise and Business Economics**

Profile: Logistics

#### **Master Degree**

- Quality Management Profile: Quality Management Economic Factors and their Assessment
- Psychology Profile: Organizational Psychology

#### **Nostrification**

The University of Technology is registered in the database ANABIN, the international system of universities' acknowledgement. having "H+" status. This status allows the University graduates to nostrify their diplomas in EU countries, participate in the competitive tenders for European research and educational grants and obtain employment in foreign companies.











## Institute for Supplementary Education

#### Programs for Skills Development and Professional Retraining in Various Areas

- Programming Languages
- Business Education
- Web-Design (Corel Draw, Photoshop, 3D Max)
   Professional Design and Modelling
- Crowdfunding
- Family Counseling

- Economics and Finance
- Accounting
- Management
   Marketing and PR
- Psychology and Pedagogics
- State and Municipal Management

#### **Additional General Developmental Programs**

- ♦ Russian as a Foreign Language
- ♦ Drawing, Sketchnoting, Fundamentals of Painting
- ♦ Stained Glass Painting Basics (Decra Led Technology) (Great Britain)

Short-term Seminars, Trainings, Master-Classes, On-Line Courses, Corporate Training

**Creative Development Programs** 

University School «UNITECH»

In addition, we are developing new educational programs at the customer request. Forms of study: full-time and part-time with the use of modern distance, digital and interactive technologies.

> Address of Institute for Supplementary Education is Moscow region, Korolyov city, Oktabriskay street 10a, room №11. Contacts: +7(495) 516 - 99 - 32; +7(495) 516 - 05 - 15





## Structural Divisions – Secondary Vocational Education

## **Space Engineering and Technology College**

The college was founded in 1947 at the proposal of Sergey Korolyov, the principal designer of airspace technologies. The educational establishment has a vast experience in training of the mid — level specialists for the rocket – space complex industries

### **Specialties**

- **♦ Information Security**
- Electronics Assembling, Maintenance and Repairs
- Prosthetic, Orthopedic and Rehabilitating Technologies
   Product, Process and Service Quality
- Management

  Informational Systems and Programming
- (by industry)

  Mechatronic and Robotics (by industry)

- **♦ Metal Processing Technology**
- Engines, Vehicle Aggregate Systems Maintenance and Repair
- **♦** Spacecraft Production
- ♦ Economics and Accounting (by industry)
- ♦ Law and Social Security Management

## **Technology and Design College**

The college was founded in 1930 and trains in-demand specialists, constituting a significant part of the Russian industrial enterprises human resources.

#### **Specialties**

- Design (by industry)
- Banking
- Graphic Design

- Garments Design, Modeling and Technology
- ♦ Household and Communal Services





## Specialized Departments



#### **JSC «Tactical Missiles Corporation»**

SPECIALIZED DEPARTMENTS
«Corporate Financial Accounting»
«Information Systems and Technologies for Design, Production and Management»

KB KhimMash named after A. Isaev SPECIALIZED DEPARTMENT «Aerospace Engine Technology»





### JSC «NPO Measuring Equipment»

SPECIALIZED DEPARTMENT
«Information Technologies for Rocket Telemetry»

JSC «Komposit»
SPECIALIZED DEPARTMENTS
SPECIALIZED DEPARTMENTS
«Quality Management and Research in the Field of New Materials and Technologies»
«Economics and Management of Production»



## NII CB named after A. Maximov

SPECIALIZED DEPARTMENT
«Management and Information Technology in Space Systems»

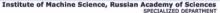
State owned Federal State Institution «Chief Scientific Metrology Centre» of Ministry of Defense of the Russian Federation PECIALIZED DEPARTMENT «Metrological Support for the Product Quality»





#### JSC «Sberbank»

SPECIALIZED DEPARTMENT











#### **Administration of Korolev City**

SPECIALIZED DEPARTMENT «Social Research»

Research Institute of Commodity Flow and Wholesale Market Conjuncture SPECIALIZED DEPARTMENT





## **Holding Company JSC «Novo»**

SPECIALIZED DEPARTMENT «Information Security»



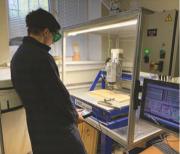
## LLC «Radio automatics»

SPECIALIZED DEPARTMENT 
«Development and Production Technology for Electronic Component 
Base and Electronic Modules»











## **Scientific Activities**



### **Research and Technological Development**

More than 100 million rubles for R&D projects in the field of new materials and technologies have been raised over the last 5 years

#### University annual scientific conferences

- ♦ College student conference «Start to Science»
- Student conference «Efficient Use for the Region Resources»
- ♦ International student conference «Science, Culture and Youth»
- ♦ Graduate students scientific and practical conference «Student Science»
- Postgraduate students conference «Innovation Aspects for the Region Social and Economic Development»
- International social and scientific readings, dedicated to the memory of Yuri Gagarin «Space exploration and Society»

#### **R&D Projects for business and government:**

- JSC «Kompozit»
- ♦ Ministry of Investment and Innovation of the Moscow region
- Ministry of Investment and Innovation of the Moscow region
- Advanced Research Foundation
  GK «Roskosmos»
- **♦** Administration of city Korolev

## **Scientific Publications**

- ♦ 3 academic periodicals, 2 included in the Higher Attestation Commission
- ♦ More than 5,000 scientific publications over the last 5 years

#### **Postgraduate Education**

More than 120 postgraduates

**Engineering Center «High Temperature Composite Materials»** 

12 R&D completed projects for the last 5 years

## **Youth Science**

- Student Research Society (more than 100 students)
   Student research abilities development
- Student Design Engineering Bureau (the winners of Worldskills, RoboFinist, RoboFest, Skolkovo, etc. competitions)
  - Industry heat power engineering Robotics
  - Rocket modeling Composites





## **Engineering Center**

- Development of technology for manufacturing complex-shaped preforms of carbon, silica, quartz, aramid fibers for polymeric, carbon-carbon and ceramic composites on radial braiding machine with a split body and movable supports
- Braiding process simulation and control systems
- ◆ Carbon-PEEK products manufacturing
- ♦ Continuous carbon fiber and PEEK products manufacturing
- ♦ Pyrolytic BN,SiC, HfC CVD, CVI Technologies for electronic industry
- Analyzing composites' porous micro structure on automated standard porosimeter 3.2 with PRT software

## Structural divisions

- ♦ Laboratory for Advanced Materials Heterogeneous Synthesis
- Laboratory for CVD, CVI Technologies
- ♦ Laboratory for New Methods of Composite Materials Forming
- ♦ Laboratory for Numerical Simulation Software Systems
- JSC «Kompozit» Specialized Department «Quality Management and Research in the field of New Materials and Technologies»

## **Center activities**

- Development of new recipes, forming the methods and technological processes for obtaining high-temperature polymeric, ceramic matrix and metal matrix composites
- Development of industrial technological processes for manufacturing products of a certain shape and composition
- Engineering and analytical support for R&D activities, including research of materials porous and micro-structure composition





## International Activity

Over 45 agreements with foreign universities have already been concluded, including networking agreements and academic exchange within the Erasmus+ program.

#### **Exchange Program**

Every year the students, postgraduates, academic and administrative staff actively participate in exchange programs with the foreign universities within the bilateral inter-institutional agreements, EC exchange program Erasmus+ and exchange programs of the Ministry of Science and Higher Education of the Russian Federation.

Joint research and educational projects are being implemented within Jean Monnet and Capacity Building Projects (Erasmus+ program)

Visiting professor

Foreign partner-universities leading professors visit the University of Technology for delivering lectures and seminars, exchanging the best practices and developing the joint projects in various spheres of activity.

#### International conferences

Annual international research and practical internet-conference «Innovation Technologies in Modern Education» Annual international research and practical conference «Future Trenda, Organizational Form and Effectiveness of Cooperation Development between Russian and Foreign Universities»

#### **International Events**

- **♦** Festival of National Cultures
- **♦ International Friendship Club**
- Russian and Japanese Friendship Club

## How do we support

◆ Consultancy and support services
 ◆ Buddy-program

- Accommodation
- ♦ Integration measures/international events

## **International Open Olympiad for School Students**

The Olympiad is held every year on the following disciplines: mathematics, physics, informatics, social science, Russian language, English language. Representatives of the CIS countries, regions of the Russian Federation, municipalities of the Moscow region participate in the Olympiad. Over – 5 000 participants.





## QUANTORIUM

(Children's Techno-Park)

Children's Techno-Park «Quantorium» is an innovative environment, aimed at developing children's inventive, creative, critical and efficient thinking.

Children enrollment, participating in supplementary educational programs, is more than 1,000 people per year.

#### **Educational Courses**

- ◆ CosmoQuantum
- ♦ IT-Quantum ♦ Industrial Design
- **♦** Robotic Quantum
- ♦ Nano Quantum ♦ Hi-Tech Quantum

#### **Functional Zones**

- ♦ Hi-tech specialized educational and training workshop
- ♦ Quantums laboratories for natural science and technical studies
- ♦ Lecture hall ♦ Chess sitting room

- Project activity zone
- ♦ Interactive museums of science

## **Implemented Programs**

Engineering Vacations

- Specialized Sessions
- Open Days
   Over 6,000 people visit Children's Techno-Park every year

## **Achievements**

The Children's Techno-Park's students are the winners and prize winners of all-Russian, regional and municipal competitions (contests), such as Quantoriada, WorldSkills Russia, WorldSkills Hriech, Quantorians are regular participants of the Moscow International Education Fair, Science Exhibitions in Skolkovo, project sessions in "Artek" and "O'renok" camps.

- Implemented projects
- ♦ Piloted Moon runway complex
- ♦ Control of cosmonaut's panel by means of MYO-interface ♦ Controlled lunar rover for driven beacons placement
- ◆ Controlled lunar rover for driven beacons placement
  ◆ «Solar Office» ◆ «Smart Garage»
- ♦ Spacecraft Object Control ( «Smart Glove»)
  ♦ Puzzle «Moscow Region»

«Smart Blinds»

Quantorium is open for scientific and technological cooperation within joint projects, Engineering vacations, competitions, contests and providing the opportunity for distance learning at Quantorium





## WorldSkills International non-commercial Movement

Goal - to increase the prestige growth for vocational professions and vocational education development by harmonizing the best practices and professional standards worldwide through holding the professional skill competitions.

Worldskills Championships take place in many countries worldwide and may be considered as the greatest event in the sphere of professional development and raising the standard of young people proficiency in various fields of activity.

### University of Technology is a regular Worldskills movement participant

- University is a venue for the Interuniversity Worldskills championships in the following competences: "Space systems engineering", "Information cable networks", "Software for business", "Entrepreneurship", etc.;
- University's students are the winners of international, national and regional championships.

Only for the last two years the University students have won 8 prizes at the Russian and International WorldSkills Championships in the following skills:

- Reverse Engineering
- CNC Milling
- Composite Technologies

- Industrial Design
- ◆ Graphics Design

## **EDUCATION - SCIENCE - INDUSTRY**



## Involvement in the Social and Economic Development of the Region

- University of Technology is a basic higher educational institution of REGIONAL SCIENCE AND EDUCATION CLUSTER «NORTH-EAST»
- University of Technology is a member of THE INTERREGIONAL INDUSTRIAL CLUSTER «COMPOSITES WITHOUT BORDERS»
   Participants: State Corporation «Rosatom», 20 industrial enterprises of the Moscow, Saratov regions, the Republic of Tatarstan, 5 universities
- University of Technology is a member of INNOVATION TERRITORIAL CLUSTER OF NUCLEAR PHYSICS AND NANOTECHNOLOGIES in Dubna, Moscow region.
- Participants: resident enterprises of the FEZ «Dubna», JSC «Kompozit», University of Technology and other enterprises of the Moscow region
- University of Technology is a member of ELECTROTECHNICAL INDUSTRIAL CLUSTER «ELECTRICAL ENGINEERING XXI»
   Participants: 15 industrial enterprises of the Moscow region, University of Technology

- International Aviation and Space Salon(MAKS)
- Moscow International Education Fair (MIEF)
- WorldSkills Russia
- \* Moscow Region Governor's Award «Nashe Podmoskovie»
- \* Moscow Region Forum «I am a Citizen of Moscow Region»
- \* All Russia safe energy festival «It's Brighter Together»
- + Gagarin Readings
- Interregional Youth Forum «Development Vector»
- All Russia Forum «Mentors»
- Strategic Initiative «Personnel of Future for the Region»
- Master-classes «Road to Stars» with the astronauts participation
- Festival «Student Spring»
- Volunteer Activity
- Moscow Region KVN League
- Various thematic exhibitions















## Extra-Curricular and Social Activities

## **University Traditions**

- + Fresher's Day
- Festival of National Cultures
- Student Creativity Festival
- \* Russian Students' Day
- Solemn Award Ceremony «Golden Section»
- Mister and Miss University Competition
- The Memory Watch Dedicated to the Victims of Great Patriotic War
- Meeting with the Great Patriotic War Veterans
- Photo exhibition dedicated to the Victory in the Great Patriotic War «Know... Remember... Proud»
- Excursions to the «Golden Ring» cities of Russia and war memorable places of the Moscow Region
- Korolyov KVN League's Games
- Youth Activists Health Improving Camps
- Fresher Alley Laying
- Report concert of the University creative teams





## Extra-Curricular and Social Activities

## **Student Teams**

- **♦ UNITECH KVN League**
- Theatre school
- Dancing Studio
- Vocal Studio
- **+ Student Chorus**
- **◆ Music Instrumental Group**
- Student Newspaper «Youth Format»
- ♦ Technology and Design College Fashion Theatre

## **Student Clubs**

- Student Council
- Patriotic Club
- Psychology Club
- **◆ International Club**
- ◆ Debating Club «Civic Platform»
- **♦ Recreational Mathematics**

## **Student Sport Clubs**

- ◆ Chess Club «White Rook»
- + Basketball Club
- + Mini Football Club
- Volleyball Club
- ◆ Table Tennis Club
- ♦ Hand-to-Hand Fighting Club
- Cheerleading Club









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**Admission Board (Institute for International Education)** 

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