

INDUSTRIAL UNIVERSITY OF TYUMEN SUSTAINABLE DEVELOPMENT GOALS 2020



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EDUCATION



4 QUALITY EDUCATION



over 220

HE Basic educational programs

14 HE programs of project method

60 educational programs of practical modular training

ISCED level 6-8

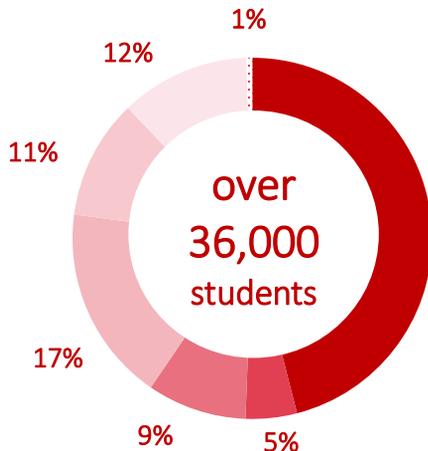
3 double degree programs

35 programs of secondary professional education (SPE) (ISCED level 3-5)

4 Educational programs in English (ISCED level 7)

over 200 programs of supplementary vocational education (SVE) (ISCED level 0-8)

21 MOOC



The structure of IUT students

- Bachelors percentage
- Specialists
- Graduate students
- SPE programs students
- SVE students
- Supplementary education students
- Basic educational program students



82% of students are affiliated to study at the IUT by the university's corporate partners

85%
of employed graduates



The strategic direction of the development of education is defined by the University as the improved access to quality education that meets the requirements of the innovation economy and the contemporary needs of society and every citizen.

A student with his/her personal educational purpose is at the heart of the changes in the IUT training process, hence, it is achieved by individualizing the educational process. An individual educational track(path) is an individual path in training that is built and implemented in accordance with the voluntary choice and cognitive needs of the student while providing pedagogical support for his or her self-identification and self-fulfilment; aimed at laying the foundations for the individual and professional development of the individual.

The vast choice of courses in the curriculum was taken into account when developing a methodology for interaction with students to support their self-identification and the development of a tutoring institution in IUT.

5075 students
enrolled in the
first year
31%
female

4774 students
received a
specialist diploma
30%
female



The University Modernization of the educational activities consists both in transforming the technology of the organization of the educational process - from planning to implementation and results evaluating, and in updating educational programs and teaching technologies.

In 2020, 50 project-based learning programs were implemented in the following areas: computer science and computer engineering, information systems and technologies, oil and gas engineering, electric power and electrical engineering, materials science and materials technology, civil engineering, heat power engineering and thermal engineering, oil and gas engineering, social work, advertising and public relations, hotel industry.



Thanks to VR technologies, students of the master's program "Offshore Drilling" can acquire experience in a real production facility without going to the field. Both the complete cycle of offshore drilling and its individual technological operations can be practiced on the virtual center basis.

The university operates an effective system of educational process management and quality control, aimed to ensure the competitive graduates training. In order to take into account the entire set of trends in education, the university's educational programs are becoming more flexible and variable, which makes it possible for students to choose an individual educational route and build a career path.



The key educational activity of the university is the multidisciplinary training in a wide range of demanded areas of engineering and architecture, necessary for the advanced development of the region's economy.

The Master's educational program "Investment Design and Estimated Pricing in Construction" has switched to project management. Currently it focuses on the practical preparation of master's degree students for their future career. The main advantage of the educational program is that graduate students are given the opportunity to develop and defend their final graduation thesis as a business project (startup). This approach will prepare students for starting their own business.

A large-scale work has been carried out to improve educational content, the basis of which is formed by massive open online courses (MOOCs). The university has the city leading laboratory in MOOCs development and application. The laboratory creates electronic products that allow the university to successfully compete in the blended learning segment. In 2020, more than 20 new massive online courses have been created, which are available for an unlimited number of users. In 2020 MOOC (IUT) was listened by 2,185 people.



Moreover, the university has successfully joined the Open Education National Platform by launching 5 massive online courses: "Techniques and Technologies for Offshore Well Drilling", "Oil and Gas Well Workover Operations", "Nondestructive Testing in Construction", "Chemistry and Physics of polymers ", " Wood and plastic constructions". Starting from 2020 course participants receive training certificates. Courses are free and are available without meeting the formal requirements for a basic level of education.

Expansion of the additional professional programs portfolio (more than 40 programs) for intra-corporate training of the teaching staff help to improve the quality of education.

One of the main objective and independent quality indicators of specialist training is the demand for graduates. The percentage of employed IUT graduates is 85% (over the past 3 years).

IUT graduates work in more than 50 regions of Russia, 45 countries of the near and far abroad.

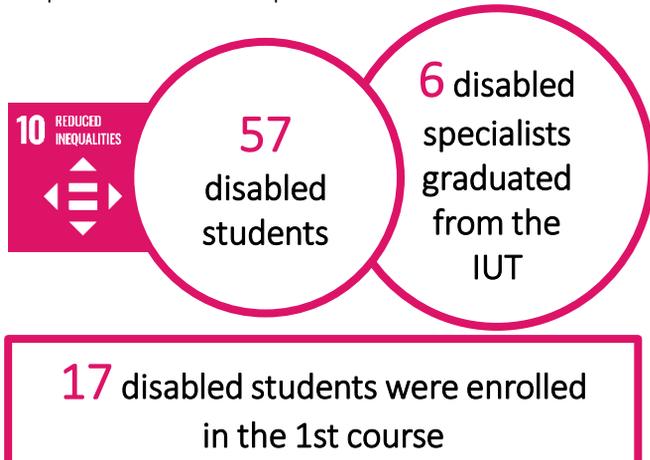
In 2020, a project was launched aimed at successfully promoting the graduates employment and organizing practical training for students. This is a multifunctional service - the digital career environment "Faculty". The service allows to track the students, graduates and employers activity in a single inter-university circuit.

At the end of 2020, 6 higher education programs and 5 further education programs were accredited with the participation of leading accrediting organizations in Russia.

In order to conduct an external independent assessment of the training quality, IUT graduates take part in the Federal Internet Exam (FIEB).

In 2020, 288 IUT graduates (25% of the graduates in the training areas participating in the FIEB) in 11 training areas took part in this project. Having successfully completed the FIEB-2020, Industrial University of Tyumen was awarded a quality certificate in six training areas: "Construction Engineering", "Informatics and Computer Engineering", "Information Systems and Technologies", "Techno-sphere Safety", "Oil and Gas Industry", "Service".

It was the first time in 2020 when 14 IUT graduates in the areas of training "Materials Science and Materials Technology", "Standardization and Metrology" took part in professional qualifications assessment procedure on the basis of the Certification Center for products and Management systems in the field of nano-industry. 9 graduates (64%) received certificates of compliance with the requirements of the professional standard.



Educational programs that directly help to achieve the SDGs



5 Programs

Social work: Social and human resources auditing in an industrial enterprise



2 Programs

Product technology and catering: Technology and organization of restaurant business

Product technology and catering: Food biotechnology



6 Programs

Instrumentation: Instrumentation, quality control and diagnostic techniques

Biotechnical systems and technologies: Biotechnical and medical equipment and systems



4 Programs

Education and Pedagogical Sciences: Theory and Methodology of Professional Education



3 Programs

Social work: Social and human resources auditing in an industrial



12 Programs

City and industrial enterprises water supply and sewerage

Water supply and sewerage, construction systems for water pollution control



23 Programs

Heat and gas supply and ventilation systems, energy auditing

Electricity and electrical engineering. Power supply

Electric-power engineering and Electrical Engineering. Smart Electricity



21 Programs

Innovatics: Financial and Economic Management of Innovation

Business Informatics: eBusiness

Educational programs that directly help to achieve the SDGs



33 Programs

Industrial innovation management
Financial and economic management of innovation



6 Programs

Conflict resolution studies: Organizational and management conflicts
Sociological Sciences: Sociology of culture
Hotel business: Hospitality Marketing



25 Programs

Civil engineering: Motor ways/roads
Reconstruction (restoration), building structural survey and monitoring
Software and computing: Intelligent technologies Smart city



16 Programs

Environmental safety in hazardous waste management



5 Programs

Techno-sphere Safety: Environmental Engineering
Land-based transport and technology systems: Machinery and equipment for natural disaster recovery and fire fighting



5 Programs

Hydrogeology and highway geology
Land-based transport and technology systems: Machinery and equipment of environmental engineering and environmental protection



7 Programs

Techno-sphere Safety. Protection and restoration of natural and man-made territories
Ecological compliance and rational nature management
Ecological compliance specialist



5 Programs

Sociological Sciences: Political sociology
Services: Human resources and legal services in the industry



SCIENCE

137 IUT
leading
scientists

4 laureates
of the All-Russian
competition "Engineer
of the Year 2020"

**4 postgraduate
students** - fellows of
federal and regional levels

62
supported
patents

22
certificates for computer
programs registration,
databases received

14
patents
received

**2 postgraduate
students** - the "START"
program winners

15
training areas for
highly qualified
personnel

34
educational
postgraduate
programs

4
dissertation
councils

6 young scientists
are of the "Clever"
program finalists in "Digital
technologies"



In 2020, IUT implemented 79 projects with a total funding of 188.8 million rubles. The productivity of scientific and teaching staff increased by 37%, from 131.6 thousand rubles per one scientific and pedagogical worker in 2019 up to 179.7 thousand rubles in 2020.

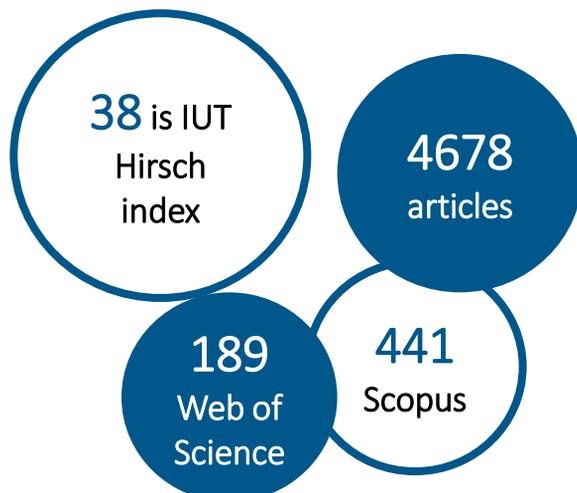
In addition to funded research projects, the university also implements initiative research topics, carried out by scientific and pedagogical workers as part of their educational and pedagogical workload. In the unified state accounting system, 444 research projects are registered from the university, 433 of which are initiative ones. The main part of the registered scientific topics is the research work of the heads of the master's programs and the scientific supervisors of post-graduate students.

In 2020, there is an increase in the university publication activity. The number of articles in publications within the 1-2 quartile of the international scientific citation base Web of Science increased by 2% compared to 2019. The increase in the share of articles in editions of quartile 1-2 of the Scopus citation base in the total volume was 1%.

In 2020, the system of technical and technological support for scientific research was modernized, 5 new laboratories were opened and 11 laboratories were updated.

The number of postgraduate students in 2020 was more than 200 people. 12 candidate and 2 doctoral theses were defended.

In 2020, the number of students involved in scientific activities has grown to 12%. One of the attraction forms is the student scientific societies activity. In 2020, 17 student associations were operated, 27 student scientific events were held.



Science projects

“Establishing a regional innovation cluster in SMART-City competences, IoT/IIoT и Big Data”.



In 2020, under the project 10 new software and software solutions for urban and industrial facilities were developed, based on which successful pilot tests were conducted:

Software and hardware system for monitoring the groundwork base in permafrost areas.

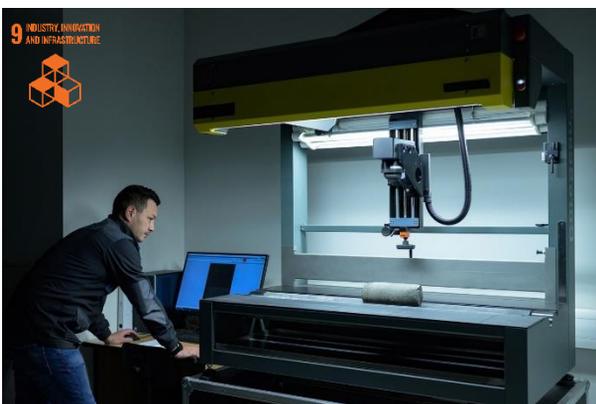
Software and hardware solution for time-keeping in construction facilities by means of the Internet of things technology within the topic of Lean production.

Hardware and software complex for monitoring and managing the urban life support systems condition.

Hardware and software solution for telemetry for thermal stabilization systems "GET" and "BET".

Digital core project.

Developing a unique intelligent system for storing and processing geological data. Creating a global database with the most complete description of the sample taken from the well.



This will make it possible to model the field, determine how the rock is structured, assess the possibilities of oil and gas production in any area, and also use the data obtained when researching oil and gas reservoirs.

“Theoretical and experimental study of a gas-liquid up-flow in vertical channels as applied to solving applied problems of the oil and gas industry”.



“Developing an integrated innovative technology for waste management and elimination of man-made objects for oil production enterprises”.



A prototype of the unit was developed and tests for drilling waste disposal were carried out in parallel with the drilling process. Proven benefits:

- Reducing the process time to two weeks
- Minimizing waste storage time
- No extensive infrastructure requirements
- No need to deliver equipment to hard-to-reach areas
- Exceeding the efficiency and safety of foreign analogues
- Costs are 10-15% lower than analogs
- Effective use at low sub-zero temperatures (up to minus 30-35C).

Science projects

“Gearbox insert based on flat bevel processing pump transmission for heavy oil production”

At the VUZPROMEXPO exhibition, a gearbox pump model for high-viscosity oils and natural bitumen production from marginal wells and a natural sample of a down-hole reactive power compensator were presented. The developed down-hole reactive power compensators are designed to improve the energy efficiency of oil production. Their design is unique, they can be used in real well conditions and can withstand temperatures up to 110 °C and pressures up to 40 MPA.



MRT and CT.

A virtual environment prototype has been developed. It allows to process the combined MRI and CT medical data in holographic space, make a diagnosis more clearly, reduce the time to prepare for surgery, and reduce risks.



“Establishing an unmanned agrobot”

Establishing an agrobot that will take soil samples from, determine acidity, moisture and nitrogen content.

The project will allow developing an electronic map of agricultural land. Users will be able to see on which site which fertilizer needs to be applied and how much. The agrobot is expected to increase yields by 40%, reduce fertilizer costs.



“Breaking the wall of thirst 2 nano”

A modular processing unit has been developed. The unit combines high-temperature vortex gas-dynamic flow parameters and minimum processing requirements.

The technology allows processing groundwater treatment waste into nano- and micro-sized powders of iron and its compounds. It can also provide raw materials for the mass production of LFP-accumulators, magnetic fluids, pigments.



“Developing high-strength structural materials”

A technology has been developed to create high-strength aluminum-based compounds with diamond hardness. A '9' logo is visible in the top right corner.

A prototype of metalworking tools with a corundum-based cutting part has been created.



Innovation Club



Participation in scientific events

The most significant international events:

1. IX Congress of Young Scientists, St. Petersburg. The reports were devoted to the digitization of education, balanced nutrition of the Arctic population, the feasibility of building roadside service facilities, the formation of a city charging infrastructure for electric vehicles, steel corrosive destruction, the environmental efficiency of the construction of a plant for processing poultry waste, cathode-anode protection of cars from corrosion.

2. International scientific conference "Lomonosov" for students, postgraduate students and young scientists, Moscow.

3. 74th International Youth Scientific Conference "Oil and Gas - 2020", Moscow. IUT participants reported on digitalization of the oil and gas industry, clay-argillite rocks stability loss, shallow electrical exploration.

4. International conference "Rassokhin readings", Ukhta.

5. International military-technical forum "Army - 2020", Moscow region. The project of the electrical platform "ElectroRoboBase" is presented. The platform is designed to transport cargo and perform related operations, such as snow removal, plowing, drilling, soil sampling, grass mowing, etc., using load carrying

attachment with electric traction to move. The platform can move both on paved roads and on rough terrain, including in closed rooms and warehouses. The platform can serve as PowerBank to charge other electrical systems, work remotely from the remote control and all-round view.

6. V International Conference "The Arctic: Offshore Projects and Sustainable Development of Regions", Moscow.



7. V International Scientific and Practical Conference "Achievements, Problems and Prospects for the Oil and Gas Industry Development", Almet'yevsk. The participants presented a flexible methodology for managing sidetracking projects, reasons and methods to control vertical gas wells flooding, influencing the fluid filtration through a core, a oil influx

TYUMEN OIL AND GAS FORUM



model with a complex wellpath, rock research after exposure to electric- and hydroshock, technologies for maintaining reservoir pressure, analysis of the problems of hydrate formation during the gas wells operation, analysis of the problems of drilling wells in solid rocks, oil-and-gas-bearing capacity prediction, results of studies on the hydrocarbon generation influence on the certain rocks properties, problems of the real estate center in the field of natural resources management, advanced training in oil and gas companies, lean - technologies in oil production, energy efficiency of fuel and energy enterprises, risk assessment of integration processes in industry.

8. IV International Youth Conference Tatarstan UpExPro 2020, Kazan.



IUT participants reported on solving the problems of bottom water breakthrough into the well, shallow electrical prospecting in permafrost regions.

9. VIII International Baltic Maritime Forum, Kaliningrad. IUT representative reported on current topics of Russian subsoil use law.

10. Tyumen Oil and Gas Forum, Tyumen. At the forum, the rector of the university and the head of Geosteering Technologies LLC signed an agreement on joint activities in the field of education, science, in the socio-cultural sphere.

Кадровые вызовы цифровой экономики: перспективные направления образования для ТЭК



IUT scientific events

1. International scientific and practical conference "Architecture and architectural environment: issues of historical and modern development. "The problems of cities and rural settlements development, architectural characters of cities, methods of optimizing the urban environment and infrastructure, improvement of urban space, bank protection, preservation of architectural cultural heritage, developing ecological zones in cities, design solutions in architecture.

2. International scientific and methodological conference "Selivanov Readings». The program included issues of the civilization and culture correlation, material and ideal, traditions and continuity. Relevant social problems, socio-cultural criteria of freedom and lack of freedom, cultural stereotypes and identity, philosophy and culture of health, education of children with disabilities, problems of opposition of culture and misogyny were considered.

3. International scientific and practical conference "Current problems of land and property relations, urbanization of the territory and a comfortable urban environment formation».

Representatives of the scientific community discussed the problems of urbanization and industrialization when forming a comfortable urban environment, the problems of sustainable development of urbanized areas, natural resources monitoring, environmental problems of land use and land development.

4. International scientific and practical conference "University science: problems of specialists training». The innovation focus in the higher education system modernization, the social capabilities of the Arctic region, the ways of interacting of the real economy with education were discussed.

5. VIII International on-line poster conference for students, postgraduates and young scientists "Science without Borders». Young scientists are interested in such issues as digital manufacturing, 3D technologies for orthopedic rehabilitation, aspects of ethnic and interracial tolerance, mind control in modern society. The reports on nature conservation raised the problems of medical waste disposal, plastic waste recycling, the concentration of harmful substances in the air and water areas, the water-physical properties of oil-contaminated soils, as well as the prospects for wind turbines.



6. International Scientific and Practical Conference "The Arctic: Modern Approaches to Industrial and Environmental Safety in the Oil and Gas Sector». 90 speakers - representatives of Russian business and international companies, researchers, reviewed a wide range of important issues of sustainable development of the Arctic territories.

First of all, the environmental problems of the development of the Arctic oil and gas resources, possible ways of their solution were discussed. Environmental safety is called the basis of sustainable development, a strategic component of the national security of the state.

An important topic of discussion was the monitoring of human health and environmental factors affecting it when developing hydrocarbon resources in the Arctic.

Many reports were devoted to methods of wastewater purification and treatment in oil fields in the Arctic zone.

Topics under discussion were the problem of waste management in the Far North, the possibilities of reducing the land waste concentration in the archipelagos of the Arctic Ocean, household waste transportation and disposal, the choice of a method for drilling waste disposal in oil and gas fields.

Also water resources pollution were discussed, as well as soil improvement issues, protection of atmospheric air, negative impact on water bodies, biological resources and their habitat in the Far North. In addition, an analysis of the activities of environmentally hazardous oil and gas production facilities in the context of global warming was presented.

Many foreign partners took part in IUT scientific events.

Azerbaijan
 Tajikistan Greece
 France
 Germany
 Uzbekistan
 Netherlands
 Belarus USA
 Kazakhstan
 Poland
 Moldova Ukraine

PARTNERSHIP

28
countries

17 PARTNERSHIPS
FOR THE GOALS



over 600
Industrial partners

68 Partner
enterprises

65 Foreign partner
universities

TIU - Membership in 9 international unions / associations

In 2020, jointly with foreign partner universities, double degree programmes were implemented: 2 undergraduate programs "Building Maintenance" (University of Applied Sciences of Southeastern Finland (Finland)), "Chemical Technology" (Kyrgyz State Technical University named after I. Razzakov (Kyrgyzstan)) and 1 master's program "Intelligent systems in transport and road construction" (Karaganda State Technical University (Kazakhstan)).

An agreement was signed with the Adnan Menderes University (Turkey) regarding the implementation of the academic mobility program. An additional agreement on the implementation of network educational programs ("1 + 4", "1 + 5") was signed with the Chinese University of Petroleum Qingdao.

A joint educational program for training bachelors in the field of "Oil and Gas Industry" is being implemented with the China Petroleum University (PRC), as well as a bachelor's double degrees programs in Chemical Technology Training Course with the Kyrgyz State Technical University named after Razzakov.

Also, agreements were signed with the Jalal-Abad State University named after B. Osmonov, the Southern Philosophical Society of Kyrgyzstan, the state Cuban organization "Cuba-

Petroleo Association (KUPET)" and the non-governmental non-profit organization Education and Science Development Fund "ZIYO FORUM".

Agreements with universities in Germany, China, Italy, Latvia, Czech Republic and other countries continue in full force.

In 2020, IUT became a member of the international association "World Energy Universities Network (WEUN)" and a partner of the International Center of Competence in Mining Engineering Education under the auspices of UNESCO. Now students and postgraduates of the university will have a possibility to take part in specialized of double diploma programs with European universities, teachers will have a possibility qualify for the title of professor, associate professor or assistant of UNESCO. Also in 2020, the university was one of the initiators of the University ConsorTIUm "Nedra" and became a member of its presidium. The purpose of the ConsorTIUm is to improve the quality of higher education, to form a unified scientific and educational environment, the efficiency of scientific research of technical universities with a training profile for the mineral resource complex in the enlarged specialty "Applied geology, mining, oil and gas industry and geodesy".



The largest national and transnational, international companies work closely with the university in training future personnel, their practical training and technical equipment. These include Rosneft, Gazprom, Schlumberger, Baker Hughes, Haliburton, LUKOIL. The list of industrial partners of the regional flagship university includes more than 600 enterprises and organizations. The largest stakeholders are PJSC Gazprom, PJSC NK Rosneft, PJSC LUKOIL, PJSC Surgutneftegaz, PJSC SIBUR,

PJSC NOVATEK, PJSC Transneft, PJSC Rosseti, PJSC SUENKO, TC Schlumberger LLC, Baker Hughes JSC, Antipinsky Oil Refinery JSC, Avtograd Group of Companies, Mostostroy-11 JSC.

Many joint projects were initiated by partner enterprises of the university in 2020, including the phygital projects: student Olympiads, business assessment games, international engineering championships, evaluation of the right to employ young specialists, etc.



**Russian-Kyrgyz
ConsorIUTm
of Technical Universities**



EXTRACURRICULAR ACTIVITIES



4 QUALITY EDUCATION



23 public associations

The concept is "From the Executor to the Creator"

over 10,000 students

6

sports student public associations

30 kinds of sports

386

student athletes

3 GOOD HEALTH AND WELL-BEING



10 centralized creative studios

Choreography

7 intra-university

Music

Literature

annual competitions and festivals

Theater

Original genre

11 SUSTAINABLE CITIES AND COMMUNITIES



The values of a modern engineer at IUT:

Think

Create

Improve

Invest

Educate



In 2020, the Academic Council of the Industrial University of Tyumen approved a new concept of educational work "From the Executor to the Creator". The Department of Extracurricular Activities has started to implement the IUT educational program "The Creator is My Way of Life". The goal of the university is to enable each student to grow, to form his/her engineering values, an entrepreneurial position, the value of mutual assistance and support, citizenship, a subject position and high social responsibility. Educational work at IUT is based on following values: think, create, improve, invest, educate.

IUT has 23 public associations with a permanent staff of more than one and a half thousand students.

Mass sports and physical culture and recreation work at the Industrial University of Tyumen is an integral part of extracurricular educational activities. The organizer and coordinator of this activity is the IUT sports club. Along with the regular structural divisions, real assistance in organizing sports and mass activities is provided by public associations of the university (IUT student sports club "Gvardia", hockey club, basketball club, tourist club, floorball club, sports programming club).

In 2020, along with the traditional sports mass work at the university (section work, optional classes, mass sports, physical culture and health events and sports days), part of the training sessions of student national teams in sports were conducted online.

In 2020, the university organized and conducted 54 (offline), 40 (online) intra-university sports and physical education events, the number of participants was 16804 people. 386 students - athletes representing IUT national teams in 30 sports are engaged in the course of sportsmanship.

IUT students, members of national teams in various sports, won more than 45 medals of various denominations at international and All-Russian competitions in 2020.

From September 30 to October 4, the All-Russian University Sports Festival ASSK.FEST-2020 was held in the capital of Tatarstan. More than 2.5 thousand students from 185 Russian universities and 14 colleges from 63 regions of the Russian Federation met at the event site. The main goal of the event is the development of mass student sports in Russia. Based on the results of the final matches, the winners in the general and individual standings were determined.

The national team of IUT, represented by the student sports club "Gvardia", showed very good results. IUT became the winner in the nomination "Best Student Sports Club" and "Best Photographer". The team won prizes in the team and individual standings in volleyball, tennis, football, basketball, table tennis, chess.

At the All-Russian final of the Championship of the Student Hockey League, which brought together more than 100 teams from 32 constituent entities of the Russian Federation, the IUT hockey club took 4th place.



As part of the World Cup in cross-country skiing, which was held in Falun (Sweden), a IUT student as part of the Russian national team took 3rd place in the 15 km and 10 km freestyle mass start.

There are many students studying at IUT who are professionally engaged in judo. Among the international achievements in 2020 is a silver medal at the European open judo tournament for men in the Austrian Oberwart. Among 244 judokas from 43 countries of the world, IUT student took second place in the weight category up to 90 kg.



IUT students have repeatedly represented the university in kettlebell lifting competitions at various levels. At the Russian championship in

kettlebell lifting among students in the weight category up to 73 kg a IUT student won a silver medal in the exercises "jerk" and "snatch".

At the All-Russian championship in kettlebell lifting among boys and girls under 18 years old, where more than 500 athletes from 39 regions of the country met, the IUT student took 3rd place in the weight category up to 63 kg in the double-event exercise with weights weighing 24 kg.



In arm-wrestling, IUT students distinguished themselves at federal championships. At the championship of Russia, a student of IUT took third place in the weight category up to 65 kg in wrestling on the left hand. At the Championship of the Ural Federal District in the individual championship, IUT students won a silver medal in the weight category over 80 kg and a bronze medal in the weight category up to 75 kg.



Tourist club "Alliance" and "Serpantin" popularize a healthy lifestyle in IUT. The clubs organize regular treks and cover such areas as mountaineering, rock climbing, hiking, skiing, mountain and boating. Students learn to travel, read maps, ski, steer a catamaran, organize hiking trips and go sports and tourist distances. There are many mountain ranges and rivers in the students' hiking map, such as Inzerskiy Zubchatki, Tofalaria, Borovoe, Zailiyskiy Alatau, Baikal, Kodar (Transbaikalia), Altai, Revun, Ergaki, Inzer, Celestial Zubya, Iremel, Eastern Sayan, Northern Tien Shan. In 2020, more than 60 activists walked along the routes of Taganai, Severo-Chuisky Ridge, Iolgo. Students purchased equipment for hiking with funds from the Big University grant won in 2020.

In order to obtain a quality education, comprehensive development, there are 10 creative studios in the following areas: literature, music, choreography, drama, specialty. In 2020, 7 intra-university annual contests and festivals were held, including "Mister and Miss IUT".

Folk dance group "MLADA", actively participating in many international and all-Russian competitions, became a laureate of

the 1st degree in the nominations "Folk dance", "Theatrical performances of ethnic culture" in 2020. The director of the dance group was recognized as the "Best director" of the on-stage performance group.

The drama group of IUT "Byt" came top 3 best amateur theaters of the international award "Star of the Theater-Lover" in Russia and obtained the President's grant for mounting a new theatre production. Their theatrical performance "Oh you, Vanya!" received the Grand Prix at the ALTER ART festival in 2020, and the theater director won the Best Director nomination.





Interpersonal culture formation, developing cultural and family values



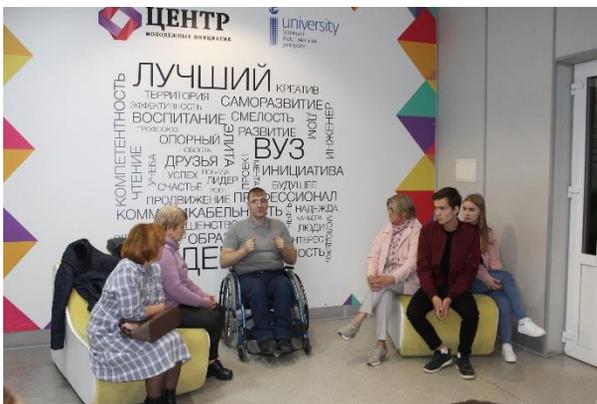
IUT as an educational institution pursues an active social policy. The support of vulnerable groups of the population is a must. The university trains 300 orphans and 59 students with disabilities. An optimal psychological climate and developed infrastructure have been created for quality education. The University has the Ability Center for Inclusive Volunteering, where about 50 volunteers are engaged in social activities. The University cooperates with the All-Russian Society of Disabled People, improves the employees qualifications in the basics of inclusive

education, provides individual socio-psychological and psychological-pedagogical support for socially vulnerable students.



In order to promote maximum and productive employment, IUT in 2020 launched a digital career environment "Faculty" - an accounting system for startups, businesses, social and scientific project teams, activities and events, a feed of vacancies and internships, digital portfolios of resumes and users. More than 1000 students and graduates and over 80 employers have created their profiles in the system. The employers have provided more than 140 relevant vacancies in different constituent entities of the Russian Federation.

The university annually holds alumni fairs, master classes on resume writing and interviewing. During the summer period, the university, as part of the employment promotion program, has contributed to the employment of more than 400 people. Vacancies were produced by student project offices, departments and other structural divisions of the university.





The emotional and social health of students is the key to successful study and socialization. At IUT, this work begins with adaptation activities for freshmen. More than 400 freshmen passed the PRE course - a three-day training for adaptation of freshmen, their tour to university, getting to know each other in format of project

activities. To form a culture of interpersonal relations at the university, an optimal psychological climate has been created, the work of psychologists and social workers has been organized, various activities are held to promote the development of interpersonal competence of students, team building trainings, debating platforms, cultural and sports events, measures to prevent addictive behavior in the youth environment are being implemented, tutors work. Specialized support and assistance is available to students of the "risk group". In order to develop relations, support and cooperation in solving the problems of students of different nationalities and countries, the "IUT International Club" was created.



To create a peaceful, healthy society, measures are periodically carried out to prevent extremism, questionnaires of students to identify a tendency to extremist manifestations, curatorial hours on the topic of countering

extremism and terrorism. In 2020, IUT took part in the all-Russian action "We are not on our way with hatred and xenophobia," in which employees of the Center for Countering Extremism of the Ministry of Internal Affairs of Russia, representatives of religious confessions, ethnic diasporas and public organizations took part. At the event, students increased their legal literacy in the field of current anti-extremist legislation, discussed the problems of extremism and xenophobia in relation to other nationalities and religions, talked about responsibility for the promotion of the criminal subculture, Internet security, tolerance and the need to provide information about visible deviations among others.



IUT is actively involved in cultural heritage preservation. On the 75th anniversary of the victory in the Great Patriotic War, IUT architects created an object d'art "Memory Funnel", aimed to patriotically educate the youth, to strengthen inter-generational alliances.

IUT students annually participate in the action "Immortal Regiment" - an international public civil-patriotic movement to preserve personal memory of the Great Patriotic War generation.

IUT students are participants in the search movement of the Tyumen region. In 2020, they participated in field work in the Tver, Novgorod, Pskov, Murmansk regions, the Republic of Karelia. Together with searchers from other regions of the country, Tyumen residents recovered and prepared for burial the remains of 250 soldiers and commanders of the Red Army, found five mortal medallions, six personal items.



Traditional events held by IUT contribute to the family values establishing. Among them, "Seeing Off the Russian Winter", where team sports competitions are held, a truly family atmosphere reigns, an atmosphere of comfort, warmth, kindness and fun. Also, the holiday "New Year in Russian" is annually held for foreign students, where listeners from different countries get to know Russian traditions, consolidate speech patterns in practice, and begin to adapt in a foreign country.





Working with schoolchildren



In order to create an effective system for the talented youth development, increase the scale of attracting

talented applicants in the region, and develop the early engineering mentality of children at IUT, an engineering reserve school was created as a center for additional education for children, students from grades 1 to 11.

More than 20 engineering courses of academic, project, Olympian profiles in full-time and distance formats are implemented at the school. 300 children who studied Lego robotics, Arduino robotics, Web-design, 3D-Animation, Mechatronics, oil and gas business, prototyping, graphic design, unmanned aerial systems, project chemistry, 3D modeling and other engineering courses graduated from school in 2020.

To spend vacation time usefully IUT organizes both field events for schoolchildren in children's camps, and project sessions on the territory of the university. In 2020, the All-Russian competition of scientific and technical projects "Engineering Reserve of Russia", "Summer Engineering Practice", online camp of Engineering Reserve School (ERS) were organized.

Excursions, educational master classes from ERS specialists and teachers, individual contests and challenges were held with the participants.

For talented schoolchildren, IUT organized a scientific and educational career guidance program "The Future is Yours", which took place at the Sirius Educational Center in Sochi.

During a week 54 Gazprom-classes students from 18 regions of Russia worked on solving case studies on the development of the Arctic shelf of the Russian Federation, modern energy, geological exploration in the Kara Sea.



Career guidance takes a special place in the university activity. In 2020, 33 vocational guidance events, attended

by 20 250 schoolchildren, were held.





IUT environmental activities



IUT has been studying the Arctic territory for many years. In 2020, the university became a platform for the annual International Scientific and Practical Conference "The Arctic: Modern Approaches to Industrial



and Environmental Safety in the Oil and Gas Sector. "At the general session and sub-forums, major aspects of labor and life safety, environmental, energy and industrial safety were considered. The conference was attended by over 90 speakers, including representatives of Russian business and international companies, researchers, experts in labor issues and students.



In order to improve the environmental awareness of schoolchildren in matters of energy saving, IUT co-organized the All-Russian competition of methodological developments "Ecological Lessons and Energy



Saving". The importance and significance of the competition was not only to draw the attention of students and their parents to one of the most important topics - the preservation and enrichment of the Earth's wealth - but also to create a responsible awareness and sensitivity to environmental safety issues.



IUT is also involved in the improvement of cities and districts in the region. In 2020 according to the concept of IUT architects the landscaping of the park named after Yakov Neumoyev was completed.



The park square is 3.2 hectares. A walking area with an area of 8,410 m² was built, part of which is made of wood-polymer composite. The park has 48 benches, swings, playgrounds and sports grounds. The gardening of the park was not affected as the designers and builders preserved all coniferous and deciduous trees, shrubs, and young seedlings were planted. The area of the lawns was 22160 m². The infrastructure of the park takes into account the possibilities of low-mobility groups of the population - tactile tiles have been laid, there is a mnemonic diagram, parking spaces have been allocated. In 2020, the university developed 9 more concepts for the Tyumen, Tobolsk and districts of the Tyumen region development.



Students meaningful activities



IUT students take an active civil and social position, participate in meaningful projects, implemented by the university. In 2020, there were 8 student construction teams: Universal, Sever, Olympus, Sokol, Vesta, Rossiyanka, Mega, Persona. Construction companies in the region cooperate with IUT in organizing industrial practice at their facilities. In 2020, university construction teams worked at the

facilities of the Mostootryad-36 TF of Mostostroy-11 JSC, the Construction Department of Mostostroy-11 JSC, FPK JSC, Mobile Personnel of Western Siberia LLC, SU-926 Avtoban, "FGC UES", Zavod "ZhBI-3", participated in the project "Yards of Tyumen" and were engaged in the improvement of the river Tura embankment. At the end of 2020, students of construction teams Vesta, Olympus, as well as of the Headquarter staff received awards "For contribution to the development of student teams in the Tyumen region, for the construction of social facilities."

Construction teams "Rossiyanka" and "Persona" took part in the project "Tyumen descend" of the All-Russian patriotic action

"Snow descend of the North Ossetia" and congratulated the veterans of the Great Patriotic War on Defender of the Fatherland Day.

The volunteer movement at IUT covers many areas: assistance to socially vulnerable citizens, educational activities support, environmental volunteering, patriotic volunteering, spiritual education of youth, strengthening family values, protecting architectural heritage, digital volunteering, volunteering in the field of culture, health, science, sports, volunteers of the Constitution.

IUT is actively involved in supporting and developing the volunteer movement. The headquarters of the IUT volunteer movement operates at the university as a student public association. More than 450 people are involved in the work of volunteer associations today.





Volunteering activities



In 2020 IUT students engaged in social volunteering communicated with children from the residential care home "Horizon" online. Using advanced technologies, volunteers conducted conversations, training sessions, and games. For example, volunteers conducted a quest-journey through the solar system with the children both on paper and through a "porthole" - a screen.



Also, the university has created an environmental association "Green IUT". Volunteers give lessons for schoolchildren, organize activities for students aimed at environmental education. The obtained theoretical



knowledge is necessarily implemented by volunteers in practice. In 2020, students took part in the International Campaign "Gardens of Memory". "Garden of Memory" is a tribute to ancestors. This Campaign is both ecological and patriotic and involves the planting of 27 million trees in memory of the 27 million who died during the Second World War. IUT students planted 75 lilac bushes in 2020.

In addition, students participate in landscaping the territory of the university and annual Cleanup Day (activities for cleaning

the territory). In 2020, volunteers decided to create an oak alley and planted 10 oak trees on campus.



In 2020, many volunteers were involved in the delivery of groceries and essential goods to those who were in self-isolation. For the prompt food delivery, a website was created to fill out an application and obtain additional information. During the action, 305 food packages were delivered, and a volunteer car drove 368 km around the city.





As part of cultural volunteering, IUT students participate in the restoration of houses that are not monuments, but are of interest from the point of view of urban flavor. These are activists of the unique

public project "Tom Sawyer Fest". In 2020, volunteers took part in the restoration of the historical environment of Tyumen, in the reconstruction of a 19th century historical object in Embaevo, organized a school for a young restorer, and won a grant to open a restoration school for adults "Bereg". Young Tyumen residents aged 8 to 13 took part in the school for the young restorer "Berezhok". Children learned carpentry and house painting, visited museums of blacksmithing and mastered work on tiles. The young restorers worked with woodcarving, joinery, ceramic tiles and art critics.



In 2020, the "Digital Volunteers" Association was established, which is engaged in raising the students and

teachers' digital literacy level, supports teachers and students during remote learning and remote

and students during remote learning and remote exams, and provides advice on installing software. When implementing the educational process using distance technologies, 50 initiative students processed more than 250 applications and created a video course on working in the educational process support system Educon 2.0. This made it possible to improve the quality of the educational process during a pandemic and reduce the number of conflict situations in the university digital.





Student projects



As part of sustainable development, IUT students create projects aimed at conserving the environment. In 2020, the works "Influence of the main land pollutants on the vital activity of earthworms as bioindicators of the soil environment", "Project of a landfill for the processing of oily waste",



"Development of an ecological and economic assessment of the activities of fuel and energy enterprises", "Generation of methane from solid municipal waste" were highly appreciated. Also, student science at IUT is actively exploring the Arctic zones of the Russian Federation. In 2018, the student scientific society Arctic Research Community was created, which in 2020 became a laureate of the Competition of scientific and diploma works devoted to the Arctic and Antarctic. In addition to participating in research, design, exploration, implementation, creative activities in 2020, students held open online lectures on the conservation and development of the Arctic, created video lectures about the Arctic.



In 2020, a students' community "Soft Skills Club 2020" was established, aimed at self-development and development of the surrounding world. Students conduct events, form an effective community, develop themselves and build effective partnerships in the student environment. Since the community has been established, students and experts discussed such issues as managing emotions, developing communication skills, effective communication techniques, critical thinking, reflection, multitasking, flexibility of thinking, emotional intelligence, public speaking, teamwork, conflicts, systems thinking, tactics and strategy, logic, creative thinking.



IUT has implemented the initiative "Student Innovation Platform" which is a center for developing an engineering mentality and innovative thinking, a technology accelerator and a youth business incubator.

During the reporting period, 5.3% of the total number of university students and 28 teachers were involved in the activities of the youth business incubator of the university.



Thanks to acceleration events organized on the basis of the Student Innovation Platform, students of the flagship university created 8 prototypes, 8 student projects and 11 ideas received financial support. The jury appreciated the projects "Patch monitor (portable electrocardiograph)", "Automated system for skull implants", "Robot speech therapist", "Dr. MAMA", aimed at supporting motherhood, allowing to assess the variability of fetal heart rate.

Health protection



In addition to popularizing a healthy lifestyle, organizing sports events, IUT annually takes part in various

health-protecting events. In 2020, in order to develop a culture of volunteerism and form a value approach in volunteering, the university participated in donor campaigns. Within the all-Russian campaign "Stop HIV / AIDS", IUT students and staff passed anonymous rapid HIV tests. Also, the Interdisciplinary Youth Debating Club held a conversation among students about the achievements and trends of 2020 in the fight against the spread and treatment of HIV infection.

Veterans Council



The IUT has a Veterans Council, which includes 18 people. They not only provide assistance to lonely, sick, elderly pensioners, disabled people, poor veterans, examine their living conditions and medical care, but also engage in patriotic education of the younger generation - schoolchildren and students.

1030 unemployed pensioners are registered with the veteran organization. The veteran organization includes 2 participants of the Great Patriotic War, 21 labor front veterans, 14 participants in peacetime hostilities.

The University Administration, understanding the problems of pensioners, annually allocates funds through a collective agreement in order to organize and implement planned activities of the Veterans Council, adopts for veterans-pensioners.

